



NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

THESIS

**A PENNY FOR YOUR THOUGHTS,
A NICKEL FOR YOUR HEART:
THE INFLUENCE OF THE COMMANDER'S
EMERGENCY RESPONSE PROGRAM ON INSURGENCY**

by

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December 2009

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PROGRAM ON INSURGENCY**

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ABSTRACT

Since 2002, \$39 billion and \$46.7 billion have been appropriated to Afghanistan and Iraq for reconstruction spending. The dollar amounts suggest that reconstruction is important in post-conflict environments, but how important is it really? Some military commanders have interestingly noticed a relationship between the insurgency and reconstruction spending, specifically with the Commander's Emergency Response Program (CERP). In post-conflict environments, CERP reconstruction efforts can be applied in such a manner that they contribute to the diffusion of the incubation and growth of insurgencies.

This research is focused on determining how the CERP program can be used to influence insurgency through a Social Movement Theoretical framework. There are two primary purposes: to determine if CERP has historically influenced the security environment in any measureable way and to develop a model comprised of those components (needs, deserve and message resonance) that could plausibly be argued to have an effect on violence and determine which components most significantly influence insurgency. The model is tested on the At Tameem province of Iraq.

The results depict that commanders have not used CERP to influence the insurgency in Iraq, but there does exist a weak positive correlation. Further, when compared to historical data, the deserve and message resonance factors contribute more to the influence of popular support than do the needs of the people. Several prescriptive implications are drawn with regard to the future use of CERP.

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LIST OF ACRONYMS AND ABBREVIATIONS

A _{AT}	Attitudinal indicator of the local perception of the abilities of the indigenous Army
A _C	Actions component of the Deserve variable
A _T	Attitude component of the Deserve variable
B _{AC}	Action indicator of the density of “bad guys” per geographic area
BSB	Brigade Support Battalion
C _{AT}	Attitudinal indicator of the local perception of the criminal justice system
CERP	Commander’s Emergency Response Program
CMO	Civil Military Operations
CPA	Coalition Provisional Authority
DTG	Date Time Group
DV	Dependent Variable
FRAGO	Fragmentary Order
G _{AT}	Attitudinal indicator of the local perception of the indigenous government
HUMINT	Human Intelligence
HVI	High Value Individual
I-CERP	Iraqi Commander’s Emergency Response Program
IDP	Internally Displaced Person
IO	Information Operations
IRMS	Iraq Reconstruction Management System
IRRF	Iraq Relief and Reconstruction Fund

IV	Independent Variable
JCC	Joint Coordination Center
LOO	Line Of Operation
OMA	Operation and Maintenance Account
P _{AT}	Attitudinal indicator of the local perception of the abilities of the police
S _{AC}	Action indicator of the density of significant actions per geographic area
SIGACT	Significant Action
SMT	Social Movement Theory
SWEAT/IR	Sewer, Water, Electric, Academics, Trash / Infrastructure Reconnaissance
T _{AC}	Action indicator of the density of Tips or reporting suspicious activity by locals
USAID	United States Agency for International Development

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I. INTRODUCTION

Since 2002, coalitions of the willing have appropriated \$39 billion to Afghanistan and \$46.7 billion to Iraq for reconstruction spending.¹ The dollar amounts suggest that reconstruction is important in post-conflict environments, but how important is it really? Reconstruction in both Afghanistan and Iraq commenced in some fashion soon after United States' boots touched the ground. The manner in which funds have been spent, and the controversy surrounding corruption scandals, have recently brought much attention to the subject. Those tasked with reconstruction oversight have been asked to ensure funds are spent in the most efficient manner possible. Some military commanders who oversee various types of reconstruction funding have interestingly noticed a relationship between the insurgency and reconstruction spending—most notably through the Commander's Emergency Response Program (CERP). In post-conflict environments, CERP reconstruction efforts can be applied in such a manner that they contribute to the diffusion of the incubation and growth of insurgencies.

The Commander's Emergency Response Program was developed in fiscal year 2003 to give commanders the ability to quickly respond to emergency humanitarian and reconstruction needs in their area of operations, and is currently available to commanders in Iraq, Afghanistan, and the Philippines.² The program began following the discovery of millions of dollars of stockpiled Ba'athist cash by U.S. forces in Iraq. As of July 2009, Congress had appropriated a total of \$5.25 billion to CERP, with \$3.63 billion³ and \$1.62 billion⁴ to Iraq and Afghanistan respectively. CERP is funded through the military's

¹ Special Inspector General for Afghanistan and Iraq Reconstruction, "April 30, 2009 Quarterly Report to Congress," <http://www.sigar.mil/reports/quarterlyreports/Oct09/pdf/SIGAROct2009Web.pdf>, 5, and http://www.sigir.mil/reports/quarterlyreports/Apr09/pdf/Section2_-_April_2009.pdf, 26 (accessed May 22, 2009).

² Special Inspector General for Iraq Reconstruction, "Management of the Commander's Emergency Response Program in Iraq for Fiscal Year 2006," <http://www.sigir.mil/reports/pdf/audits/07-006.pdf> (accessed March 19, 2009).

³ Special Inspector General for Iraq Reconstruction, "Tables: Iraq Reconstruction Funding Sources and Uses," <http://www.sigir.mil/reports/quarterlyreports/Jul09/tables.aspx#Section2> (accessed October 28, 2009).

⁴ Special Inspector General for Afghanistan Reconstruction, "July 30, 2009 Quarterly Report to Congress," http://www.sigar.mil/reports/quarterlyreports/Jul09/pdf/Report_-_July_2009.pdf, 34.

Operations and Maintenance (OMA) account, rather than as a part of a reconstruction aid package.⁵ The original intent of CERP was to enable commanders to “respond to urgent humanitarian relief and reconstruction requirements within their areas of responsibility, by carrying out programs that will immediately assist the Iraqi people...”⁶ However, some have noticed strong ancillary benefits. The title of the CERP Standard Operating Procedure book is “Money as a Weapon System,” which alludes to the ability of CERP to influence hearts and minds.

In an attempt to determine what was contributing to the fertility of insurgent recruiting in 2004 Baghdad, then Major General Peter Chiarelli determined that he could deny insurgent influence by creating visible progress through the application of essential services construction, increased employment and perceived government progress/involvement.⁷ Similarly, Helmus et al. (2007) argue that U.S. forces can use Civil Military Operations (CMO) and CERP funds to encourage civilian behavior.⁸ They state that projects may be allocated or strategically withheld based on adherence to U.S. operational norms.

Others such as Biddle (2006) and Pernie and O’Connell (2008) argue that there is no direct correlation between the provision of essential services and the propensity of a population to support an insurgency.⁹ Biddle argued that reconstruction efforts will never be more than marginal benefits that never really get to the heart of the problem.¹⁰ Is \$46.7 billion appropriated for all major Iraq reconstruction an appropriate amount to

⁵ Christopher Griffin, “A Working Plan: Hope Isn’t the Only Strategy for Afghanistan,” *Armed Forces Journal* April, 2007 <http://www.armedforcesjournal.com/2007/04/2587549/> (accessed October 31, 2009).

⁶ Mark Martins, “The Commander’s Emergency Response Program,” *Joint Forces Quarterly*, 37 (2005): 47.

⁷ Peter Chiarelli and Patrick Michaelis, “Winning the Peace: The Requirement for Full Spectrum Operations,” *Military Review*, Jul-Aug (2005): 10.

⁸ Todd Helmus, Christopher Paul and Russell Glenn, “Enlisting Madison Avenue: The Marketing Approach to Earning Popular Support in Theaters of Operation (Santa Monica: RAND Corporation, 2007), 139.

⁹ Bruce Pirnie and Edward O’Connell, “Counterinsurgency in Iraq 2003-2006” (Santa Monica: RAND, 2008), 86.

¹⁰ Stephen Biddle, “Seeing Baghdad, Thinking Saigon,” *Foreign Affairs* 85, no. 2 (2006): 2.

spend on marginal support? Is the support even marginal? This research directly addresses these questions.

The somewhat sporadic application of reconstruction efforts in Afghanistan and Iraq, along with the lack of a noticeable relationship between reconstruction and insurgent activity has led to belief that reconstruction efforts are marginal at best. Much of the value of reconstruction is in the prioritization of projects. Numerous methods of prioritization have been used; however such methods have generally focused narrowly on the needs of provincial sized communities. Additionally, there are many other factors at play—such as personalities of power brokers, bribery/corruption, and interagency conundrums. The state of the theories supports this notion—prioritization has not been conducted in such a way to maximize ancillary benefits; which can actually be more important than the intended physical result. Thus, it is difficult to determine the true intricacies of the relationship between reconstruction and violence.

A. PURPOSE AND SCOPE

It is clear that several dynamic factors influence the nature of conflict. Popular support in any type of conflict is always something national and international forces will have to grapple with. In a type of conflict where the enemy is vying for the exact same support base, the environment becomes significantly more complex. The ability to capture and kill threats to national and international norms is an important component for the provision of security, but this component alone rarely if ever prevents further violence—especially when considering a budding insurgency. Security and reconstruction are not independent, rather they are interdependent. This has become a resounding reality in Iraq and Afghanistan. The extent to which reconstruction can be used to influence the security situation is extremely valuable to the optimization of the security environment and money spent on reconstruction. This thesis is an effort to understand how and to what extent reconstruction can influence the security environment. In a fight against insurgents, counterinsurgents have become painfully aware that non-lethal methods are potentially more important than lethal methods. In post-conflict environments, CERP reconstruction

efforts can be applied in such a manner that they contribute to the diffusion of the incubation and growth of insurgencies.

There are two primary purposes of this research. First, to determine if CERP has historically influenced the security environment in any measureable way and second, to develop a model comprised of those components that could plausibly be argued to have an effect on violence according to Social Movement Theory and determine which components most significantly influence insurgency.

As stated previously the model was developed in congruence with Social Movement Theory, encompassing those components that would most significantly contribute to the diffusion of contentious collective action. It is comprised of three primary components: needs, deserve and message resonance. The needs are determined based on the assessed status of popular needs and a population's perception of the value they place on various needs based on Maslow's hierarchy. The deserve component is determined based on a combination of a village/neighborhood's actions and attitudes. The combination of these two factors uses behavioral indicators to determine the level of the population's support toward the counterinsurgency. Finally, the messages accompanying a project determine the extent to which the results of the project resonate. The following section provides further understanding of the components of this thesis.

B. METHODOLOGY

1. Dependent Variable

In order to determine the contribution of the independent variables toward successful CERP implementation at the village level, a dependent variable (DV) figure for comparison was established to depict the relative success of CERP implementation in each village. Given the analysis above, a CERP to violence ratio was developed and is represented below.

$$DV3 = \frac{CERP \$}{\left\{ \frac{[Village Violent Acts]}{[Village Population]} \right.} \left. \frac{[Sub - District Violent Acts]}{[Sub - District Population]} \right\}$$

DV1 represents the simple ratio between money spent and violence at the village level. DV2 represents the same ratio with locally normalized violence. DV3 represents the ration between CERP money spent and violence at the village level and is locally normalized by violence and population size. A higher output represents a more successful CERP to violence ratio. In other words, \$10 spent per 10 violent acts is worse than \$10 spent per 5 violent acts. This ratio represent the success of CERP implementation.

2. Independent Variables

a. *IV1: Project Characteristics*

Project characteristics consist of the needs of the population and indicators of how much the population deserves to have their needs fulfilled. Thus, the two primary components are Needs and Deserve.

The needs of one village or neighborhood are obviously almost always different than another village or neighborhood. Additionally, the residents of those locations could perceive the value of their needs at different levels. In low-intensity and post-conflict societies, Maslow's Physiological and Safety needs are typically unfulfilled. Analysis of an indigenous society's perception and prioritization of physiological/safety needs is paramount in determining how to weight the incentive of reconstruction.

Knowing how an indigenous society values their needs is critical; however, it is only part of the solution. A ground truth assessment is also needed for each village to determine the actual status of basic needs. Village assessments are used for this research and embody data on the status of 30 different essential service related entities.

Analysis of deserve indicators reveals that passive supporters of an insurgency constitute the portion of the population that CERP can most beneficially

affect. Therefore, the measures for optimization should be weighted based on the probability that a particular project will gain support from this part of the population. Indicators of a population's behavior can be thought of as actions and attitudes. Based on the availability of data this research uses seven indicators for actions and attitudes. Actions are comprised of: the level penetration of "Bad guys" into a village/neighborhood (B_{AC}), the amount of tips that a village/neighborhood provides to governmental or security forces (T_{AC}) and the SIGACTs in a village/neighborhood (S_{AC}). Attitudes are comprised of: surveyed confidence in the Criminal justice system (C_{AT}), the abilities of the Government (G_{AT}), the ability of the local Army (A_{AT}), and the ability of the local police forces (P_{AT}). The proper consideration of all seven components, and the appropriate weighting of the components, is fundamental to the maximization of the incentive nature of CERP projects through the provision to that part of the population most deserving.

The needs and deserve components are useful in the determination of how support can be leveraged based on which behavioral indicators. However, these components alone do not fully consider all factors that can influence the ancillary effects of reconstruction projects. The degree to which the story accompanying message resonance spreads will determine how the greater area will be influenced by project completion.

b. IV2: Message Resonance

Determination of the extent to which the message accompanying a CERP reconstruction project will resonate is clearly context dependent. For this research, I analyzed the phenomenon from the micro, meso, and macro levels. These three levels, with regard to CERP reconstruction, can best be thought of according to the following classification:

Micro—Will they see it?

Meso—Will they talk about it? Maybe they don't see it but their neighbors do.

Macro—Will they hear about it, read about it, or watch it?

To determine the extent to which the people of a village will see a project, I used the population densities of each village. Much like with the spread of infectious disease, the denser a population, the more likely a message is to spread. For the meso level analysis, I examine the proximity of each village to every other village to determine the likelihood that residents of one village would talk about CERP reconstruction projects in another village. It is more likely that tightly clustered villages will have a higher exposure to the goings on of a nearby village or adjoining neighborhood than of a distant village. The macro level is slightly more complicated. Data on the availability of media throughout an area of operations is needed to determine where and how far the various media outlets will carry the story. This research uses buffers to determine which areas are privy to which media outlets. A sum score of the media outlets available to each area depicts the degree to which the media can be used to spread a story. Villages with a higher score have greater access to media. The combination of all message resonance levels determines the degree to which the construction of a project in one village or neighborhood will provide ancillary effects in gaining popular support in surrounding areas.

3. Analysis and Testing

Upon establishment of the model, the interplay of the independent variable components are analyzed in relation to the dependent variable. Multivariate regressions at the village level are used to determine the extent to which each component contributes to the dependent variable. The independent variables are then manipulated mathematically to provide a prioritization output for further analysis.

The model is tested using village level data from the At Tameem (Kirkuk) province of Iraq. Village assessments, violence data, reconstruction data and surveyed popular beliefs were collected through the Iraqi Army and U.S. forces currently stationed in the province. The data are formatted according to a sample of 168 villages distributed throughout the province. A summary of the findings is presented below.

C. SUMMARIZED FINDINGS

The results derived through this model generate a number of testable implications on the relationship between CERP reconstruction and violence. First, there has historically been a weak positive relationship between CERP reconstruction and violence. This is true for both the sample set and the total 695 villages that exist in the province. For the sample set, for every \$40,000 spent on CERP there is one violent act.

Second, analysis of spatio-temporal data reveals that in the At Tameem province U.S. forces have not intended to utilize CERP as a tool against insurgency. In other words, CERP has not been used as a “weapon system” as the Standard Operating Procedure handbook alludes to. Violence was not negatively affected as a result of CERP project completion and CERP projects were not planned for areas where popular support was ripe for influence.

Third, in the analysis of those areas where CERP was most successful (i.e., it most significantly negatively influenced violence), it was revealed that the deserve and message resonance components carry much more weight than the needs component. In other words, if the purpose of CERP is to influence popular support, then the actual needs of the people are of least importance. It should be noted that this finding is based around the fact that there are numerous other reconstruction funds that can and should be allocated to provide for the basic needs of that part of the population from which support already exists. Thus, in an attempt to win popular support, prioritization of CERP expenditures should consider that the needs of the people are notably less important than their behavior and the degree to which the “story” about the resulting project will resonate.

D. STRUCTURE

The remainder of this thesis will proceed as follows. Chapter II provides a theoretical framework that explains the theory, current state of the literature, the variables and respective components. Chapter III expounds upon IV1, providing the components

and math behind incorporation into the model. Chapter IV addresses the role of the message that accompanies reconstruction projects. This chapter uses a spatial perspective to determine how themes and messages can have a compounding effect on project completion. Chapter V is a case study of At Tameem Province of Iraq. This chapter uses real-world data from 695 villages and 168 village assessments to determine the relationship of CERP reconstruction and violence and to test the model in a real world scenario. The intent of this chapter is to determine if CERP has influenced localized violence and to examine which components of the model most influence violence. Chapter VI draws on the At Tameem case study to demonstrate the implications of the model and on the broader post-conflict security environment. It provides a summary of key findings, implications and recommendations. Finally, the appendices provide diagrams and tables used to describe processes throughout the research.

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II. THEORETICAL FRAMEWORK

The nature of contentious collective action in low-intensity or post-conflict environments is incredibly complex. Social movements are “collective challenges, based on common purposes and social solidarities, in sustained interaction with elites, opponents, and authorities.”¹¹ These types of collective action generate strength because they challenge power holders, produce cohesion and have meaning within particular population groups and cultures.¹² When these types of movements become violent, as they often do in limited or low-intensity conflicts, the value of non-lethal approaches may actually be more important than that of lethal approaches, and both approaches are fundamentally interrelated. In low-intensity or post-conflict environments, successful reconstruction efforts are those that are applied in such a manner that they contribute to the diffusion of the incubation and growth of social movements. My first independent variable, characteristics of reconstruction projects, consists of prioritization based on how much a particular village or neighborhood needs a project *and* how much the village or neighborhood deserves the project. My second independent variable, accompanying message resonance, consists of those efforts designed to counter opposing strategic frames. The probability that reconstruction efforts will be successful is dependent on the characteristics of reconstruction projects compounded by the accompanying message resonance.

The remainder of this chapter will proceed as follows. Section A will elaborate on the relationship between reconstruction and state legitimacy. Section B follows with a detailed description of reconstruction efforts in those low-intensity and post-conflict environments with a current U.S. presence. Section C reviews existing literature on reconstruction, insurgency and arguments of any links therein. In Section D Social Movement Theory is introduced as a theoretical framework for the analysis of the influence of the Commander’s Emergency Response Program (CERP) reconstruction on

¹¹ Sidney Tarrow, *Power in Movement* (New York: Cambridge University Press, 2008), 4.

¹² Ibid.

insurgency. Section E presents the components of my argument and Section F concludes with the methodology for the remainder of this research.

A. RECONSTRUCTION AND STATE LEGITIMACY

Reconstruction exists as a tool for the de-escalation of violent or potentially violent social movements. The World Bank defines reconstruction as “the rebuilding of the socioeconomic framework of society” and the rebuilding of enabling conditions for a functioning peacetime society—to include the economy, governance and the rule of law.¹³ Orr classifies post-conflict reconstruction more broadly as those efforts designed to help an indigenous government build a minimally capable state in four specific areas: security, governance and participation, social and economic well being, and justice and reconciliation.¹⁴ All four of these pillars of reconstruction are long-term capacity goals that are vital to a state achieving a level of legitimacy that is deemed acceptable by its constituents. A discussion of the relationship between reconstruction and state legitimacy is necessary for an understanding of the long-term implications involved in undertaking the task of reconstruction.

The difficulty in justifying the expenditure of large amounts of money in post-conflict reconstruction is in the inability to effectively measure the effects of reconstruction on the environment. Campaign plans for Iraq and Afghanistan for at least the past five years have included overarching goals for the improvement of five major categories: security, governance, humanitarian assistance, economic stabilization and infrastructure, and justice and reconciliation.¹⁵ Measurements that do exist to identify the contribution of reconstruction toward these major goals demonstrate that reconstruction is really nothing more than a fringe contributor to any category. Biddle (2006) contends that

¹³ World Bank, “Post-Conflict Reconstruction: The Role of the World Bank” (Washington D.C.: The International Bank for Reconstruction and Development, 1998), 14.

¹⁴ Robert Orr, *Winning the Peace: An American Strategy for Post-Conflict Reconstruction* (Washington D.C.: The CSIS Press, 2004), 11.

¹⁵ U.S. Department of State, “Post-Conflict Reconstruction Essential Tasks,” <http://www.state.gov/documents/organization/53464.pdf> (accessed 16 November, 2008).

reconstruction and economic aid provide only marginal benefits that will never really get to the core of the problem in Iraq.¹⁶ The data that exists support this argument and the attitude of those indirectly involved with reconstruction generally supports this argument as well. Thus, the purpose of this study is to evaluate whether reconstruction really is just a marginal contribution to post-conflict stability, or if the current data only support this argument because of the haphazard and unsynchronized application of reconstruction projects.

As nations attempt to regain their footing following major conflict, the struggle for legitimacy is influenced by several factors and, with the presence of an international actor(s), the factors influencing legitimacy become significantly more complex. As conflict transforms from high-intensity to low-intensity, expectations invariably mount among the population for a more promising future. As transition unfolds, key power brokers emerge and often promise a return to a normalized status as a tradeoff for short-term stability, to meet the expectations of constituents. Quite often, the more the power brokers follow through with their promises, the more expectations are met, and the more their legitimacy grows. Gilley (2009) says legitimacy is a particular type of political support that is grounded in common good or shared moral evaluations.¹⁷ In other words, legitimacy is rooted in shared norms and values. However, the widespread presence of shared norms and values in post-conflict societies is not a common characteristic—especially in those societies that have just emerged from civil war or conflicts of long duration. So what are the pre-existing conditions in terms of how a post-conflict society develops shared norms and values, and how does the satisfaction of these conditions (or lack thereof) contribute to the strength of legitimacy?

After studying the counterinsurgency in Iraq from 2003–2006, RAND authors Pirnie and O’Connell (2008) concluded that there was no direct correlation between the provision of essential services and the propensity of a population to support an

¹⁶ Stephen Biddle, “Seeing Baghdad, Thinking Saigon,” *Foreign Affairs* 85, no. 2 (2006): 2.

¹⁷ Bruce Gilley, *The Right to Rule* (New York: Colombia University Press, 2009), 5.

insurgency.¹⁸ However, the authors go on to say that reconstruction is important in counterinsurgency because people associate it with a legitimate government. While Pirnie and O’Connell argue there is no direct relationship between reconstruction and popular support for an insurgency, they do seem to suggest that there is a direct relationship between reconstruction and legitimacy of the government.

Since the popular support for a state over that for an insurgency is strongly linked to the strength of state legitimacy, reconstruction proves a valuable tool in the development of legitimacy. And, with the role of international actors in the post-conflict affairs of a minimally capable state, reconstruction becomes extremely valuable in the legitimacy of the international actor and the new government that the international actor is trying to legitimize. Maslow’s hierarchy of needs is a useful tool for the analysis of this relationship (Figure 2.1).¹⁹ The concept holds that those most basic needs, at the bottom of the pyramid, must be satisfied first to allow growth and upward movement. The higher needs will not become clear until basic needs are realized. When a new government takes power, or an international actor assumes governmental control, an expectation is established for the provision of basic governmental services; which entails meeting the shared moral standards of a political community that Gilley discusses with regard to legitimacy.²⁰ With the chaos inherent in a post-conflict society, the difficulty in providing for the needs of a country is immense. Depending on the nature of the conflict, needs may range from those most basic in severely damaged areas to non-existent in areas less burdened by the destruction of war.

¹⁸ Bruce Pirnie and Edward O’Connell, “Counterinsurgency in Iraq 2003-2006” (Santa Monica: RAND, 2008), 86.

¹⁹ A.H. Maslow, “A Theory of Human Motivation,” *Psychological Review*, 50 (1943): 370–396.

²⁰ Bruce Gilley, 5.



Figure 2.1. Maslow's Hierarchy of Needs

When considering Maslow's hierarchy of needs in post-conflict environments, it is important to note that if the government isn't providing the most basic needs, people will find a way to satisfy their needs as a matter of survival. The satisfaction of physiological and safety needs by a government is required in the quest for legitimacy. The roots of legitimacy are in shared norms and values, which comprise the upper half of Maslow's hierarchy. Without the fulfillment of basic physiological and safety needs, the people of a post-conflict society may find it difficult to put stock into shared norms and values. As lower-level basic needs are provided, a population will begin to aspire to higher-level needs. With upward movement toward the belonging and esteem needs, a population will become more inclined to organize and build or reform institutions. With institutional formation comes shared understandings and expectations. Interestingly, it is often the upper half of Maslow's hierarchy that insurgents tend to target with tools such as propaganda. This likely has something to do with their desire to generate a common understanding and develop a mechanism for movement toward contentious collective action. The ability of a state or international actor to manage shared understandings and fulfill expectations will ultimately steer the course of governmental legitimacy.

This discussion of the relationship between reconstruction and state legitimacy is important for the understanding of long-term governmental capacity goals, but it also demonstrates the potential for reconstruction to influence insurgency—whether directly

or indirectly. The purpose of this research is to determine if reconstruction can be used in the short-term to influence conflict. The following section will elaborate on the specifics of reconstruction efforts in those areas with current U.S. presence.

B. BACKGROUND ON CURRENT RECONSTRUCTION EFFORTS

The numerous types of reconstruction spending make it difficult to analyze their influence on the security environment unless they are unpacked. A description of the different types of reconstruction available, taken with consideration of those actors most able to influence the security environment, will lead to a discussion on the importance of CERP. Finally, elaboration on the CERP will highlight the program's potential to influence the security environment—both positively and negatively.

In Afghanistan and Iraq, there are several types of reconstruction funding, macro to micro in scale. Critical infrastructure reconstruction, utilizing appropriated funds such as Iraq Relief and Reconstruction Funds (IRRF) and the Economic Support and Development Assistance Funds in Afghanistan, provide macro level examples that would typically be controlled by the U.S. State Department,²¹ the United States Agency for International Development (USAID) or the U.S. Army Corps of Engineers. As of October 2008, 97% of the congressionally appropriated \$20.9 billion IRRF funds were obligated for various macro level projects.²² Such projects primarily include infrastructural necessities such as water, electricity and sewer systems for one or more provinces. At the micro level, as of July 2009 Congress has appropriated a total of \$5.25 billion to the Commander's Emergency Response Program (CERP). The appropriations

²¹ Apportioned funds such as the IRRF, ISFF, ESF and CERP are restricted to six departments or agencies: DoD, DoS, USAID, Treasury, the U.S. Institute of Peace (USIP), and the Department of Health and Human Services, http://www.sigir.mil/reports/quarterlyreports/jan09/pdf/app_e_-_january_2009.pdf (accessed March 19, 2009).

²² U.S. Department of State, "Section 2207 Report on Iraq Relief and Reconstruction, October 2008," <http://www.state.gov/p/nea/rls/rpt/115549.htm> (accessed March 18, 2009).

amount to \$3.63 billion²³ and \$1.62 billion²⁴ in Iraq and Afghanistan respectively. This research will focus on the micro level—specifically on CERP because it resides in the hands of combatant commanders who most directly address local conditions, especially security conditions.

The CERP program was developed in fiscal year 2003 to give commanders the ability to respond to emergency humanitarian and reconstruction needs in their area of operations, and is currently available to commanders in Iraq, Afghanistan and the Philippines.²⁵ The program began in 2003, following the discovery of millions of dollars of stockpiled Ba’athist cash by U.S. forces in Iraq. With the collapse of the Iraqi government and the discovery of dilapidated state of Iraqi public services, commanders found themselves straddling the tasks of actively engaging the enemy and providing public services. Following approval of the Coalition Provisional Authority (CPA), FRAGO 89 was published on June 19, enabling commanders to “respond to urgent humanitarian relief and reconstruction requirements within their areas of responsibility, by carrying out programs that will immediately assist the Iraqi people”²⁶ Although CERP funds were initially intended for more humanitarian assistance and relief purposes of immediate impact, a much larger value was quickly realized. General Peter Chiarelli, for example, effectively demonstrated in 2005 how the provision of basic essential services in Sadr City had a direct correlation with insurgent activity.²⁷ The financial muscle possessed by commanders at the company level and up has proven paramount in the improvement of basic governmental functions and economic conditions, connecting with

²³ Special Inspector General for Iraq Reconstruction, “Tables: Iraq Reconstruction Funding Sources and Uses,” <http://www.sigir.mil/reports/quarterlyreports/Jul09/tables.aspx#Section2> (accessed October 28, 2009).

²⁴ Special Inspector General for Afghanistan Reconstruction, “July 30, 2009 Quarterly Report to Congress,” http://www.sigar.mil/reports/quarterlyreports/Jul09/pdf/Report_-_July_2009.pdf, 34.

²⁵ Special Inspector General for Iraq Reconstruction, “Management of the Commander’s Emergency Response Program in Iraq for Fiscal Year 2006,” <http://www.sigir.mil/reports/pdf/audits/07-006.pdf> (accessed March 19, 2009).

²⁶ Mark Martins, “The Commander’s Emergency Response Program,” *Joint Forces Quarterly*, 37 (2005): 47.

²⁷ Peter Chiarelli and Patrick Michaelis, “Winning the Peace: The Requirement for Full Spectrum Operations,” *Military Review*, Jul-Aug (2005): 9.

the local populace and ultimately defeating the insurgency. When used optimally by commanders, CERP has positively impacted the lines of operation [security, governance, humanitarian assistance, economic stabilization and infrastructure, and justice and reconstruction].²⁸ CERP funds provide an adequate source of interim relief and can provide permanent solutions if appropriately tied to long-term objectives. A potential criticism of CERP, however, is the lack of coordinated effects across areas of responsibility.

A large benefit of CERP is in its ability to effectively streamline early reconstruction efforts—capable of quickly producing visible results. However, the most common complaint by Iraqis in 2007 was the lack of visible results after four years of U.S. occupation.²⁹ This contradiction may be due to the extreme discretion given to commanders with, in some cases, a lack of a synchronizing mechanism to measure combined effects. While visible results are important, the secondary and tertiary effects may actually be more important. If employed properly, CERP contributions to basic services and other governmental functions create a perception among the populace that aids significantly in legitimizing the developing local and central governments. Such ancillary benefits are an example of what makes reconstruction so important to counterinsurgents. One way CERP manifests itself in a counterinsurgent capacity is through connecting commanders with the population, resulting in an increase in information flow. As the population becomes comfortable with the activity and presence of Soldiers conducting CERP activities, a cycle of trust is built. Soldiers become more understanding of the culture and society within which they are conducting operations. Subsequently, they are able to more appropriately and effectively provide for popular needs via the CERP. Intelligence in counterinsurgency is about people and what makes it

²⁸ U.S. Department of State, “Post-Conflict Reconstruction Essential Tasks,” <http://www.state.gov/documents/organization/53464.pdf> (accessed 16 November, 2008).

²⁹ Zeyad Junade Omar, Major, Iraqi Army, personal interview, Kirkuk, Iraq, May 16, 2007.

so challenging is the amount of socio-cultural information that must be gathered and understood.³⁰ The proper use of CERP contributes immensely to this demand; however, the improper use can certainly hinder efforts.

While the importance of reconstruction in affecting social movements has proved successful in a few cases like General Chiarelli's, numerous challenges are presented to preclude optimization. Failure to recognize the potential strength of reconstruction has led to poor or ineffective use—especially at the CERP level. Some commanders tend to compete with peer commanders for headline-grabbing victories.³¹ Such was the case in Kirkuk, Iraq in 2007. A Brigade Support Battalion (BSB) commander, who did not own any battle space, was eager to spend CERP funds for the construction of a playground in a Kirkuk neighborhood. The commander spent \$74,000 on a playground in a neighborhood that had no electricity or running water. He was subsequently featured in numerous local and international newspapers.³² Despite the earlier recommendations of an Iraqi civil affairs officer to address the needs of the local people, he bullishly mandated that a playground be built. The result was a showcasing of the most money spent rather than of the most positive effects achieved, and in this case poor use created negative effects. Today the playground is surrounded by a six-foot fence topped with barbed wire and access is only granted with the presence of a security guard. Sewage continues to flow down the side streets and electrical wires hang above the playground, linking neighbors to personal generators. Occasionally there are kids in the playground. The neighborhood where the playground was built continues to be one of Kirkuk's most violent.

On July 15, 2009, Representative John Murtha, Chairman of the House Appropriations defense sub-committee, wrote a letter to Secretary of Defense Robert Gates stating that “A fundamental review of CERP, its purposes, use and scope, is long

³⁰ United States Army, Counterinsurgency Field Manual, 135.

³¹ Martins, 51.

³² This article ran in numerous local and U.S. newspapers. One example of the article can be found here: <http://www.25idl.army.mil/HAW/Oct2007/Haw%2005Oct07.pdf>.

overdue.”³³ This letter came after the newly opened Caravan Hotel in Baghdad was looted as coalition forces turned the completed CERP project over to Iraqi officials. The targets of the looting were flat screen televisions, computers and high class furniture—all bought with CERP funds. As some officials feared, the availability of the funds to commanders may actually be too wide. Additionally, the discontinuity created by continual personnel rotations negates any potential credibility and positive processes from trending upward. Instead reconstruction efforts tend to ebb and flow with the rotation cycles. Finally, most commanders apply reconstruction based simply on the anticipated physical results the projects. They fail to consider the power of incentive behind such projects. In other words, they spend money on a playground because they think it will make children happy, but don’t consider the impact that fixing the existing underground sewers could have on personal grievances within a neighborhood.

C. STATE OF THE LITERATURE

The nature of low-intensity and post-conflict environments has required those involved to become grudgingly aware of the role of “hearts and minds.” The preceding phrase, which potentially flirts with an issue of overuse, serves as a constant reminder of the importance of a population in insurgent environments. Fundamentally, counterinsurgents compete with insurgents for the support of the population. Ultimately, a state must gain legitimacy in the eyes of its constituents to maintain stability. According to past and current counterinsurgency practitioners alike, successful counterinsurgency practices focus on the population, their needs, and security.³⁴ This section will review key arguments on the role of popular support in counterinsurgency. Next, a review of the literature on reconstruction and arguments over the prioritization of reconstruction will highlight the progression of reconstruction thought. Finally, arguments on the potential links between insurgency and reconstruction will be reviewed.

³³ Ernesto Londono, “U.S. ‘Money Weapon’ Yields Mixed Results,” *Washington Post*, July 27, 2009. <http://www.washingtonpost.com/wp-dyn/content/article/2009/07/26/AR2009072602833.html>.

³⁴ Kalev Sepp, “Best Practices in Counterinsurgency,” *Military Review*, May-Jun (2005): 10.

1. Counterinsurgency Literature

Over the past six years, research on insurgency has been vigorously raked over and expounded upon. The synergy of scholarship and continual experience has elevated understanding of insurgency to a new level. As stated previously, a fundamental principle of the counterinsurgency literature is the role of the population. In 1937, Mao stated “Because guerrilla warfare basically derives from the masses and is supported by them, it can neither exist nor flourish if it separates itself from their sympathies and cooperation.”³⁵ In 1966, Galula stated the support of the population is as important for insurgents as it is for counterinsurgents.³⁶ Literature published since the beginning of conflicts in Afghanistan and Iraq carries the same theme. Sepp (2005)³⁷ and Nagl (2005)³⁸ both discuss the importance of the population and the fulfillment of their needs to ensure their satisfaction. The U.S. Army and Marine Corps Counterinsurgency Field Manual, states that “Irregular warfare depends not just on our military prowess, but also on our understanding of such social dynamics as tribal politics, social networks, religious influences, and cultural mores.”³⁹ The concept of focusing on the population as the center of gravity in counterinsurgency operations is now widely accepted across the battlefield. But the degree to which it is understood and practiced with regard to reconstruction varies considerably.

2. Reconstruction Literature

Much the same as research on counterinsurgency has developed recently, so too has research on low-intensity and post-conflict reconstruction. As significant U.S.

35 Samuel Griffith, *Mao Tse-Tung On Guerrilla Warfare* (Baltimore: The Nautical & Aviation Publishing Company of America, 1992), 71.

36 David Galula, *Counterinsurgency Warfare, Theory and Practice* (Westport, CT: Praeger Security International, 2006), 74.

37 Sepp, “Best Practices in Counterinsurgency.” 10.

38 John Nagl, *Learning to Eat Soup With a Knife* (Chicago: University of Chicago Press, 2005), 22.

39 John Nagl, David Patreaus, James Amos, *U.S. Army Field Manual No. 3-24* (Chicago: University of Chicago Press, 2007), 1.

counterinsurgency efforts in two countries persist and checks continue to be written, significant concern over the effectiveness of reconstruction spending has surfaced.⁴⁰ The literature on reconstruction is focused according to three major themes: the purpose of reconstruction, the prioritization of reconstruction, and the relationship between reconstruction and security. There is a substantial amount of literature that supports the argument that reconstruction is important in low-intensity or post-conflict environments, but a comparatively small amount of literature argues whether reconstruction contributes to social movements, to what extent, and by what means.

a. The Purpose of Post-conflict Reconstruction

Orr (2004) argues that the areas of security, governance and participation, social and economic well being, and justice and reconciliation are all vital for a state to achieve legitimacy in the eyes of its constituents.⁴¹ He goes on to argue that post-conflict reconstruction efforts should be designed to assist in the development of a minimally capable state through one or more of these areas. The Guidebook for Economic Development in Stability Operations states the primary goal of stability operations is to maintain or reestablish a safe and secure environment.⁴² It goes on to insinuate that economic well being influences a population's interest in establishing and maintaining security. The Guidebook then states the secondary goal of reconstruction is to enhance the reputation of the national government in the eyes of its constituents.⁴³

The recurring theme throughout this section of the literature suggests that reconstruction is critical to the maturation of a state's legitimacy as perceived by the state's constituents. This literature is a valuable contribution to this research because of

40 See "U.S. 'Money Weapon' Yields Mixed Results," <http://www.washingtonpost.com/wp-dyn/content/article/2009/07/26/AR2009072602833.html>.

41 Orr, *Winning the Peace, American Strategy for Post-Conflict Reconstruction*, 11.

42 Keith Crane, et. al, "Guidebook for Supporting Economic Development in Stability Operations," (Santa Monica: RAND Corporation, 2009), 3.

43 Ibid.

the nexus between governmental legitimacy, insurgency, and reconstruction. Thus, reconstruction has the ability to impact insurgency, whether directly or indirectly.

b. The Prioritization of Reconstruction Efforts

There is wide agreement in the literature acknowledging the importance of Maslow's hierarchy of needs in the prioritization of reconstruction efforts. The U.S. Army Corps of Engineers has used this methodology doctrinally for quite some time.⁴⁴ The SWEAT/IR Book demonstrates the importance of prioritizing the needs of the people based on SWEAT/IR (Sewer, Water, Electric, Academics, Trash/Infrastructure Reconnaissance) assessments.

Timilsina (2007) developed a reconstruction prioritization framework based on case studies from Cambodia, Mozambique and Haiti and interviews with reconstruction practitioners.⁴⁵ She argues that reconstruction efforts should focus on security and relief assistance first, and then on governance and economic stabilization. She develops a hierarchy of priorities by sector that serve as an appropriate set of guidelines for initial reconstruction planning.⁴⁶ Additionally, her case studies and interviews provide valuable lessons learned for consideration in prioritization.

Lindberg (2008) conducted a study establishing a methodology for the prioritization of reconstruction efforts based on the perceived feedback on military Lines of Effort (LOE's).⁴⁷ Lindberg develops a model called Critical Infrastructure Portfolio Selection in which he weighs project costs and construction risks. However, Lindberg's assumptions are made in a vacuum—he fails to account for the dynamics of the insurgent

44 United States Army Engineer School, "The SWEAT/IR Book: Infrastructure Reconnaissance," <http://portal.dean.usma.edu/departments/se/capstones/CIPrioritization/Shared%20Documents/Forms/AllItems.aspx>, October 6, 2005.

45 Anga Timilsina, "Getting the Policies Right: The Prioritization and Sequencing of Policies in Post-Conflict Countries" (Santa Monica: Rand, 2006), 135.

46 Ibid., 136.

47 Travis Lindberg and David Anderson, "Prioritizing the Reconstruction of Critical Infrastructure with a Stability Operation Environment," *Small Wars Journal* (2008), <http://smallwarsjournal.com/mag/2008/09/prioritizing-the-reconstructio.php>, 2.

environment. Lindberg's model is not flexible enough to account for changes in the insurgent environment or quickly adjust to counterinsurgent demands. In congruence with most writers on the topic, Lindberg does not acknowledge the community aspect at all and focuses his efforts simply on the amount of people the projects will affect—essentially half the picture.

c. The Relationship between Security and Reconstruction

As the conflicts in Afghanistan and Iraq have progressed and measures of effectiveness have matured, there has been an increase in the amount of literature that analyzes the link between reconstruction and insurgency. Initially, research on reconstruction was focused on the fundamental purposes, and then on how best to prioritize projects to maximize the number of people served. Slowly, thinking has evolved to consider the impacts of reconstruction projects on the security environment. In an attempt to determine what was contributing to the fertility of insurgent recruiting in 2004 Baghdad, then Major General Peter Chiarelli determined that he could deny insurgent influence by creating visible progress through the application of essential services construction, increased employment and perceived government progress/involvement.⁴⁸ General Chiarelli was among the first to document the potential for reconstruction to influence the security environment, and certainly the first in the Iraq conflict to employ such measures.

Helmus et al. (2007) argue that U.S. forces can use Civil Military Operations (CMO) and CERP funds to encourage civilian behavior.⁴⁹ They state that projects may be allocated or strategically withheld based on adherence to U.S. operational norms...but expectations must be clearly identified and set forth for the

48 Peter Chiarelli and Patrick Michaelis, "Winning the Peace: The Requirement for Full Spectrum Operations," *Military Review*, July–August (2005): 10.

49 Todd Helmus, Christopher Paul and Russell Glenn, "Enlisting Madison Avenue: The Marketing Approach to Earning Popular Support in Theaters of Operation (Santa Monica: RAND Corporation, 2007), 139.

population.⁵⁰ The authors encourage the use of CMO rewards to highlight the benefits of popular compliance. Focus by the authors on the incentive nature of such projects is critical and they go on to warn of the potential danger if insurgent groups become familiar with the process and deliberately take action to deny aid.

Finally, only one source acknowledges the importance of prioritizing the location of reconstruction projects. Berman, Shapiro and Felter (2008), conclude that greater service provision generally leads to less violence when applied according to “community characteristics.”⁵¹ By community characteristics the authors are referring specifically to levels of social cohesion, sectarian status, socio-economic grievances, and natural resource endowments. They predicated their research on the development of a counterinsurgency model showcasing a three party struggle over information between the government, rebels and the population. Berman et al argue that the population will only share information if the benefits outweigh the costs. At first glance, the authors found that there is a positive relationship between the provision of public goods and violence. However, upon analysis of the provision of public goods according to community characteristics, the authors find a negative relationship between public good provision and violence, as predicted. Berman et al correctly conclude that in addition to their research, governments and aid agencies require better guidance on where investments will yield the highest returns in terms of social order and reduced violence. Their conclusions are broad in that the provision of public goods reduces levels of violence. The authors discuss the incentive nature of public good provision, but stop short of assessing how the incentive value can be used by counterinsurgents at the lowest level to gain popular support. Additionally, the authors’ use of the district level of analysis in Iraq

50 Todd Helmus, Christopher Paul and Russell Glenn, “Enlisting Madison Avenue: The Marketing Approach to Earning Popular Support in Theaters of Operation (Santa Monica: RAND Corporation, 2007), 139.

51 Eli Berman, Jacob Shapiro, and Joseph Felter, “Can Hearts and Minds be Bought? The Economics of Counterinsurgency in Iraq,” 35. <http://econ.ucsd.edu/~elib/ham.pdf>, December 2008.

is too broad as the decentralization of spending within districts is abundant. Analysis at the district level cannot effectively capture the motivation of a village to lend their support for one side or the other.

There are also those authors who argue there is no connection between reconstruction and insurgency. As stated previously, Pirnie and O'Connell (2008) argue that there is no direct correlation between the provision of essential services and the propensity of a population to support an insurgency.⁵² They do argue, however, that reconstruction is important in counterinsurgency because it adds to the legitimacy of the indigenous government. An increase in governmental legitimacy would likely lead to an increase in popular support—for the counterinsurgents.

Biddle (2006) argues that reconstruction and economic aid will not fix the problem in Iraq.⁵³ Biddle argues that reconstruction efforts are essentially fringe or marginal benefits that will never really get to the heart of the problem. The author states that the war in Iraq should be fought as a communal civil war and the methods proposed by the Bush administration will not work in defeating the Iraqi insurgency. Biddle fails to acknowledge the presence and importance of those results of reconstruction efforts that are other than simply visible. The ancillary benefits of reconstruction, such as improved relationships, networking, employment, perception of improvement, perception of government legitimacy, etc., may actually be contributing significantly to the defeat of the insurgency in Iraq. Helmus et al. make the argument that these types of projects can in fact provide ancillary benefits. But perhaps the visible results are actually more important.

The literature addressing counterinsurgency and reconstruction is abundant, but a relatively small amount analyzes whether reconstruction directly contributes to counterinsurgency and to what extent. Further, there is no research on the development of a model to show where the greatest effects can be achieved if

⁵² Pirnie and O'Connell, *Counterinsurgency in Iraq 2003-2006*, 86.

⁵³ Stephen Biddle, "Seeing Baghdad, Thinking Saigon," *Foreign Affairs* 85, no. 2 (2006): 2.

reconstruction does influence insurgency. A more robust analysis is vital to the realization of the true importance of reconstruction in post-conflict environments.

D. THEORY

Social Movement Theory (SMT) provides a useful lens for the analysis of counterinsurgency and low-intensity conflict due to the group level dynamics involved (Figure 2.2). This section will refine the definition of social movements, discuss the major components and progression of social movements and outline why SMT is useful for the analysis of the influence of reconstruction on insurgency. I then present a systematic look at SMT and discuss how the systemized perspective assists in the understanding of reconstruction's impact on insurgency.

As stated previously, social movements are “collective challenges, based on common purposes and social solidarities, in sustained interaction with elites, opponents, and authorities.”⁵⁴ These types of collective action generate strength because they challenge power holders, produce cohesion and have meaning within particular population groups and cultures.⁵⁵ Tarrow (1998) states that social movements ultimately seek to develop the capacity to maintain sustained challenges against powerful opponents based on underlying social networks and resonant collective action frames.⁵⁶ Social movement theorists⁵⁷ typically explain the theory according to three important, strongly interlinked components that contribute to the power of collective action: political opportunity, mobilizing structures and strategic framing processes. Social movement theory is valuable to this research because the types of conflicts where CERP funds are currently available (Iraq, Afghanistan and the Philippines) are ridden with movements that pose a threat to the security and stability of the state.

⁵⁴ Sidney Tarrow, *Power in Movement* (New York: Cambridge University Press, 2008), 4.

⁵⁵ Ibid.

⁵⁶ Ibid., 2.

⁵⁷ McAdam, Snow, Tarrow and others refer to and agree with the three components of SMT.

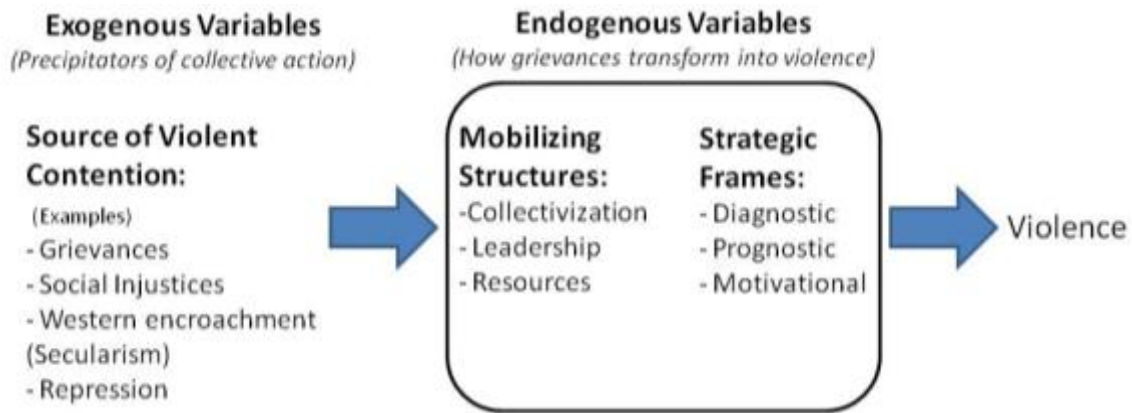


Figure 2.2. A Systematic Look at SMT

Although the conflicts in Iraq, Afghanistan and the Philippines have not been exclusively grievance driven, with examples such as the ethnic/sectarian violence in 2006–2007 Iraq, grievances against the state are prevalent in low-intensity and post-conflict societies when a government is struggling to gain legitimacy in the eyes of its constituents. Even in situations where ethnic or sectarian difficulties arise, there is regularly the presence of grievance toward the state in terms of bias. Insurgencies typically occur under the presence of grievance. Social movement theory helps explain why.

In most cases, individuals in Iraq, Afghanistan and the Philippines are not violent from the onset; rather they are transformed through a vehicle of contentious collective action to use violence as a tool. This research will view the theory from a systematic perspective; in that there are inputs (exogenous factors), there are internal transforming factors (endogenous factors) and then there is the output of movement violence. Critical to the understanding of social movements is that both exogenous and endogenous variables are at work. CERP reconstruction projects appear valuable when understood through this model as they can intervene with both the exogenous and endogenous variables as a tool against the propagation of violence.

From an exogenous standpoint, CERP reconstruction projects can target the root causes of many of the grievances that motivate parts of the population to gravitate toward

collective violent contention as a means of survival. Upon the interrogation of more than 100 Taliban and other radicalists in Afghanistan, Ambassador Ronald Neumann was briefed by the U.S. military that the reasons why these fighters supported the Taliban had little to do with religious ideology, but rather bad government and economics.⁵⁸ One of the four components of the “perfect storm” that LTG Karl Eikenberry attributed to the resurgence of the Taliban in Afghanistan was the lag of planning and implementation of critical infrastructure reconstruction.⁵⁹ My first independent variable—the characteristics of CERP reconstruction projects, which consists of prioritization based on how much a particular village or neighborhood needs a project *and* how much the village or neighborhood deserves the project, is designed to target the exogenous factors of contentious collective action.

From an endogenous standpoint, the ability of messages accompanying reconstruction projects to discredit insurgent strategic frames, which are often centered on the poor quality of basic services, gives these projects strength. While the physical reconstruction projects should directly address the root of popular grievances, the messages should seek to directly discredit the enemy frames. McAdam, McCarthy and Zald (1996) define strategic frames as conscious strategic efforts by groups of people to fashion shared understandings of themselves and the world that legitimate and motivate collective action.⁶⁰ Frames can be diagnostic, prognostic or motivational for a movement to achieve their desired effect in the progression toward collective action.⁶¹ My second independent variable—CERP project message resonance is designed to counter enemy movement strategic frames.

58 Seth Jones, *In the Graveyard of Empires*, Advance Copy (New York: WW Norton & Co, 2009), 231.

59 Ibid., 234.

60 Doug McAdam, John McCarthy, and Mayer Zald, *Comparative Perspectives on Social Movements* (New York: Cambridge University Press, 1996), 6.

61 David Snow, Rens Vliegenthart, and Catherine Corrigan-Brown, “Framing the French Riots: A Comparative Study of Frame Variation,” *Social Forces* 86, no. 2 (2007): 387.

E. ARGUMENT

In a fight against insurgents, counterinsurgents have become painfully aware that non-lethal methods are potentially more important than lethal methods. In post-conflict environments, CERP reconstruction efforts can be applied in such a manner that they contribute to the diffusion of the incubation and growth of insurgencies. This section will present the key argument of this thesis and the model that will be used to identify if and how much reconstruction influences insurgency. It will explain the components of the model and the variables used to operationalize the argument.

One could look to the cases of Afghanistan and Iraq to analyze precisely how much reconstruction efforts have lessened the strength of the insurgencies, however, such measurements would be fundamentally flawed. To date, post-conflict reconstruction efforts have been applied sub-optimally; particularly in Afghanistan and Iraq. This thesis argues that CERP can significantly influence social movements in the post-conflict environment. Specifically, the probability of successful reconstruction efforts is a function of the characteristics of reconstruction projects and the accompanying message resonance. The utility of reconstruction efforts is intimately intertwined with the diffusion of insurgency.

Commanders should approach CERP funded reconstruction projects from a standpoint that capitalizes on the underlying incentive the projects provide. In reality, a dollar spent in one geographic area is not equal to a dollar spent in another area due to the dynamics of the insurgent environment. Optimal application would seek to produce the “biggest bang for the buck” with respect to the effects created through project completion. The reason those like Stephen Biddle⁶² and RAND authors Bruce Pirnie and

62 Stephen Biddle, “Seeing Baghdad, Thinking Saigon,” *Foreign Affairs* 85, no. 2 (2006): 2.

Edward O’Connell believe that reconstruction has no effect on counterinsurgent violence is because the projects have been prioritized improperly, thus providing seemingly minimal positive benefits.⁶³

1. The Model

My argument holds that projects should be prioritized based on a relationship between how much people of a particular area need certain reconstruction projects and how much they deserve to have those projects actualized. The level of analysis is at the village/neighborhood level, where CERP reconstruction projects can be used to precisely impact popular support. The needs are determined based on the assessed status of needs and a population’s perception of the value they place on various needs based on Maslow’s hierarchy. The deserve component is determined based on a combination of a village/neighborhood’s actions and attitudes. The combination of these two factors helps determine the level of the population’s support toward the counterinsurgency. Finally, the messages accompanying a project will determine the strength of the project’s effect on combating the movement. Figure 2.3 is a graphical depiction of the argument.

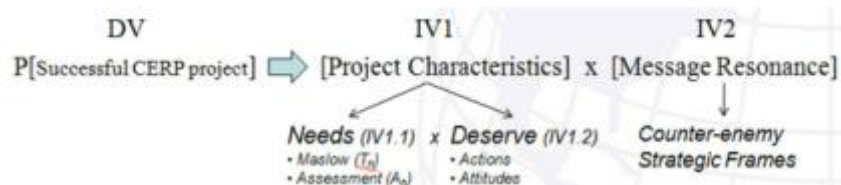


Figure 2.3. Argument

2. IV1: CERP Project Characteristics

a. IV1.1: Needs

The needs of one village or neighborhood are obviously almost always different than another village or neighborhood. Additionally, the residents of those

⁶³ Bruce Pirnie and Edward O’Connell, “Counterinsurgency in Iraq 2003-2006” (Santa Monica: RAND, 2008), 86.

locations could perceive the value of their needs at different levels. In low-intensity and post-conflict societies, Maslow's Physiological and Safety needs are typically unfulfilled. Analysis of an indigenous society's perception and prioritization of physiological/safety needs is paramount in determining how to weight the incentive of reconstruction. For example, Figure 2.4 depicts the priority of needs for Kirkuk Iraqis.

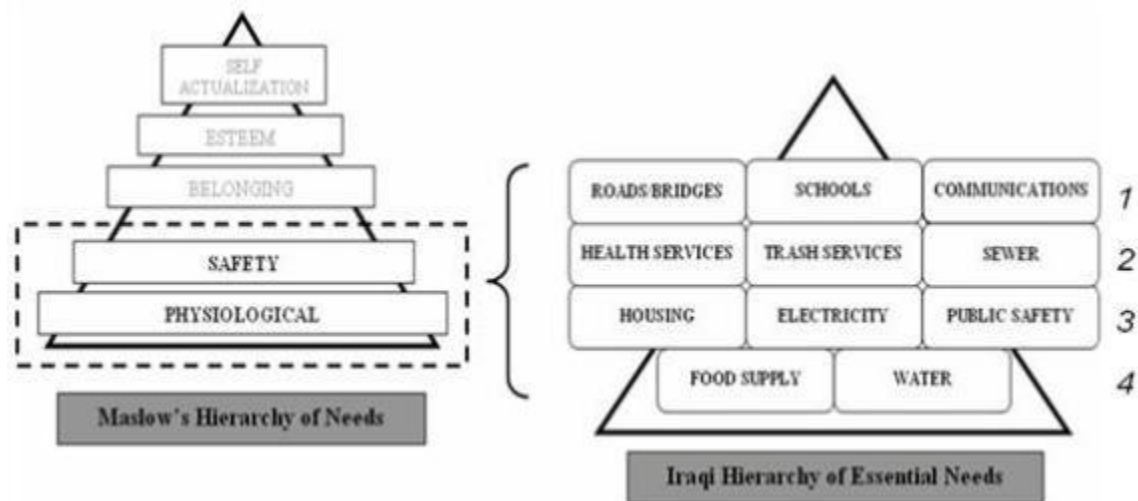


Figure 2.4. Example Weighted Priority of Needs for Kirkuk Iraqis⁶⁴

The needs are weighted from the bottom, with food and water being the most important at a value of four, and roads/bridges, schools and communications being least important with a value of one. For this research, the Tier of needs, or T_N , can take on a value from most important to least important of 4-1, as depicted in the hierarchy above. Every project should seek to maximize the incentive value that resides at the project location based on the hierarchy of needs. It is critical to note that the hierarchy may vary by village/neighborhood—the better the population is known from the bottom up, the more accurately the indigenous priority of needs can be assessed—and the stronger the incentive of projects will be. The use of indigenous forces to provide perspective in this regard is extremely valuable.

⁶⁴ This hierarchy was created by the Iraqi Army in Kirkuk, Iraq in 2007 after surveying over 100 local villages.

Knowing how an indigenous society values their needs is critical; however, it is only part of the solution. A ground truth assessment is also needed for each village to determine the actual status of basic needs. The status of a particular need can range from non-existent with a value of four, to 100% operational with a value of one—meaning those services in the worst shape are weighted the highest and those in the best shape are weighted the lowest. This ground truth estimate can be completed in the form of a village assessment. [See Appendix A] Thus, the Assessed status of a village or neighborhood's needs, or A_N , can take on a value from worst to best of 4–1. Again, the perspective indigenous forces can provide in this regard is extremely valuable.

In summary, the mathematical representation of a village's needs could be understood as follows: $T_N * A_N$, where T_N represents the Tier of the need represented in the weighted hierarchy with values 4–1 (most important to least important), and A_N represents the Assessed status of services in a particular village or neighborhood with values 4–1 (worst condition to best condition).

b. IV1.2: Deserves

To date, most CERP projects are completed simply based on the “need” component; and even then only the assessed need (A_N). Not only do the projects need to be weighted based on their level of indigenous perceived prioritization, but projects should seek to maximize the incentive value that resides differently at every location. As Kriesberg (2007) states, “The conventional understanding among many partisans and observers of conflicts is that [violent] coercion is needed to induce an adversary to change its will.”⁶⁵ This type of thinking is absent of the recognition of the importance of the population, especially in the three countries where CERP available. Kriesberg posits three types of inducements or incentives: coercion, reward, and persuasion.⁶⁶ The use of CERP reconstruction projects directly contributes to the reward incentive. Commanders

⁶⁵ Louis Kriesberg, *Constructive Conflicts* (Lanham: Rowman & Littlefield, 2007), 95.

⁶⁶ Louis Kriesberg, *Constructive Conflicts*, 96.

in possession of CERP funds have the ability to incentivize popular support by rewarding those villages or neighborhoods who deserve reconstruction projects.

The Iraq CERP Standard Operating Procedure (SOP) book is entitled *Money as a Weapon System*. Although the purpose of CERP as stated in the book is little more than to provide urgent humanitarian relief and job creation, CERP truly does exist as a potential “weapon” or a tool in gaining the support of the population. With the primary mission of combatant commanders being the provision of security and stability, CERP should be used as a tool toward achieving the desired end state of greater security and stability. The portion of the population from which a commander can achieve the greatest amount of positive effects in terms of gaining security and stability is represented in the “Area of Focus” portion of Figure 2.5.

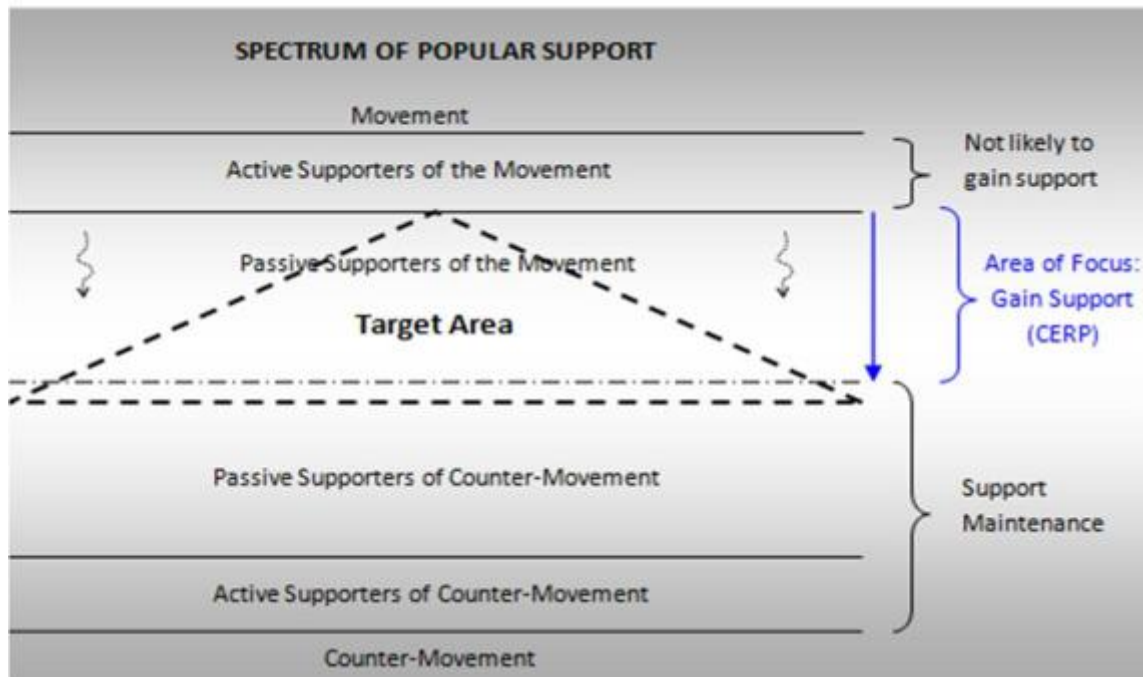


Figure 2.5. The Spectrum of Popular Support and Area of Focus for CERP Reconstruction

Passive supporters of the movement constitute the portion of the population that CERP can most beneficially affect. Therefore, the measures for

optimization should be weighted based on the probability that a particular project will gain support from this part of the population. The portion of the population closer to the mid-line is weighted higher (1). Those closer to being active supporters of the insurgency are less likely to support counterinsurgents and thus receive a low score (0).

Clearly, the need to provide basic needs and services exists at all levels and once support is gained by a certain population, it is vital that the support is maintained. To gain support, CERP money should be focused on that portion of the population where support does not already exist. This reasoning does not marginalize maintenance of support from that portion of the population on the bottom half of figure 2.5, it simply focuses the spending of CERP as a tool against a movement. There are numerous other funds that can and should be focused toward support maintenance. I-CERP (Iraqi-CERP which are funds nearly identical to CERP but delegated to Iraqi Security Forces), provincial and donor funds should all be tied into support maintenance. Support maintenance projects should target Maslow's higher level belonging, esteem and psychological needs, as the safety and physiological needs would likely already have been fulfilled.

It is important to note that although CERP funds should be focused toward gaining support of the part of the population mentioned above, commanders must maintain the flexibility to quickly draw on CERP to prevent a village or neighborhood's migration back across the center line in support of a movement. Situations such as this and "flashpoint" situations, in which a commander may have greater positive effects by adjusting his prioritization of projects to resolve a dispute of an immediate nature, demonstrate the kind of elasticity that must be present to ensure success.

Bruce Gilley uses the terms "Actions" and "Attitudes" as indicators of a population's perception of state legitimacy.⁶⁷ The terms also provide a useful way to think about how much a village or neighborhood deserves to receive CERP reconstruction assistance based on their level of support for a movement. Determining

⁶⁷ Bruce Gilley, *The Right to Rule* (New York: Columbia University Press, 2009), 13.

where a village/neighborhood falls on the spectrum of popular support (Figure 2.5) is a difficult task. Several factors contribute to the willingness of a population to support insurgents or counterinsurgents. This research analyzes seven components, three for actions and four for attitudes. The components were derived as a function of hypothesized representation and data availability. They are presented here and expanded upon in Chapter III.

Actions are comprised of: the level penetration of “Bad guys” into a village/neighborhood (B_{AC}), the amount of tips that a village/neighborhood provides to governmental or security forces (T_{AC}) and the SIGACTs in a village/neighborhood (S_{AC}). Attitudes are comprised of: surveyed confidence in the Criminal justice system (C_{AT}), the abilities of the Government (G_{AT}), the ability of the local Army (A_{AT}), and the ability of the local police forces (P_{AT}). The proper consideration of all seven components and the appropriate weighting of the components is fundamental to the maximization of the incentive nature of CERP projects through the provision to that part of the population most deserving.

Thus, the mathematical representation of where a village/neighborhood falls on the spectrum of popular support (Figure 2.5) could be depicted as follows:

$$\begin{array}{ccc} \text{Actions} & * & \text{Attitudes} \\ (B_{AC} + T_{AC} + S_{AC}) & * & (G_{AT} + C_{AT} + A_{AT} + P_{AT}) \end{array}$$

The true value of reconstruction as it relates to social movements according to the mathematical representation noted above will prove extremely beneficial for the drawing of prescriptive implications in post-conflict societies. The final multiplication of IV1.1 and IV1.2 will produce an output in the form of a prioritized list of reconstruction projects that balances the needs and level of popular support of a village/neighborhood to provide a commander with the greatest positive effects that capitalize on the incentive nature of the projects. Additionally, the power of the message that accompanies reconstruction projects provides the potential for even greater effects.

3. IV2: Message Resonance

The message that accompanies a particular reconstruction project can be extremely powerful and should be considered a required component for project completion. With regard to low-intensity or post-conflict environment, the message refers to information that is transmitted from the counterinsurgent to a receiver either verbally or nonverbally. The receiver, or target, of the message can vary depending on the effects one is trying to achieve. It can be argued that a moderate project with an excellent message is better than an excellent project with no message. Getting the word out about project planning, construction and completion is extremely valuable to negating all stages of movement progression. The incentive value of reconstruction projects—especially CERP projects can be used to affect parts of the population other than just those receiving the physical benefits of the project, thus achieving the desired trickledown effect with surrounding villages and neighborhoods.

The degree to which a message resonates within and without the target population determines how much the CERP project characteristics (IV1) will be compounded, and ultimately the probability of project success. Identification of the target population, message validity and the identification of movement strategic frames are the critical components of message resonance. The target population varies based on Figure 2.6.

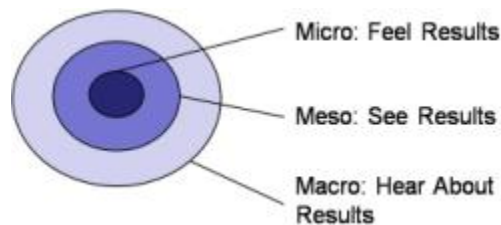


Figure 2.6. Target Populations for Message Resonance

The recipients of a particular project should be selected based on the probability that the project will gain their support, and thus represent the primary target group for the message. Messages targeting the “fence sitters” will occur at the micro-level, demonstrating how the project will impact the lives of those in the village in very real

terms. Another reason those physically affected by the project are the primary targets of the message is because these people will actually feel the results of the project. Messages with these people will resonate to a very high degree based on the fact that they are actually experiencing the results of the project.

Further from the center of the circle, the secondary ring consists of surrounding villages or nearby neighborhoods that are also likely to physically see the results of project completion. The intent of the message targeting these groups is to penetrate into the deeper, more unsupportive portions of the population in a persuasive manner. Recipients of these meso-level messages have not yet had their needs satisfied to the degree of those where the project was completed. Visual recognition of project completion means messages will resonate to a certain degree if the message well depicts the relationship between the preferred behavior of the project recipients and project construction.

The tertiary message recipient is the population at large. These macro-messages consist more of pictures in newspapers and on TV in an attempt to make progress as visible as possible to that portion of the population that is further from the center. Those affected by this message will come from all strata on the spectrum of popular support. The central theme of these messages is progression and reward for positive behavior. Management of the message by counterinsurgents is critical in maximizing the persuasive effects of a reconstruction project.

The final target group of the message is the insurgent or opponent. Messages that target this group should seek to directly discredit those diagnostic, prognostic, and motivational frames that the insurgent is using to perpetuate collective action in that geographic area. An understanding the target populations that messages accompanying reconstruction projects affect assists in depicting how the projects contribute to the counterinsurgency.

When considering how a message can benefit CERP reconstruction, it is important to acknowledge the need for message validity. When messages are communicated in low-intensity or post-conflict environments, the trust of the population

is something that cannot afford to be misguided. Each time interaction occurs between counterinsurgents (and insurgents, but to a lesser degree) and the population, an expectation is developed. If counterinsurgents fail to meet those expectations, trust is lost or degraded.

The identification of movement strategic frames can most effectively be accomplished through four methods: Presence, Organizational mechanisms (Debriefs, meeting minutes, centralized database, etc.), indigenous force perspective, and surveys/assessments.

The message capitalizes on the rewarding nature (incentive) of the project for the recipients, as well as the persuasive inducement for those that have the potential to also receive reconstruction benefits. There is no formal mechanism to ensure that appropriate messages accompany reconstruction projects and to target specific recipients for the various purposes necessary to contribute to the diffusion of social movements. Therefore, reconstruction projects are often not nearly as effective as they could be in affecting the insurgency. While the physical effects of reconstruction projects can be applied in such a manner to maximize their rewarding inducement, the messages accompanying these projects are extremely valuable in maximizing the persuasive power of the project.

F. METHODOLOGY FOR THE REMAINDER OF THIS STUDY

The remainder of this thesis will unpack the elements of this argument and test them with real world data. Chapter III will discuss the components of IV1 in detailed fashion. It provides background and justification for the variables used and demonstrates their necessity. Chapter IV expands on the details of IV2 and the role the message plays with regard to reconstruction. This chapter will discuss the current reactive nature of counterinsurgent messages and provide justification for the necessity of IV2 in the argument. Chapter V will present a case study of Kirkuk, Iraq to evaluate the effectiveness and validity of the model. I use Kirkuk as the case study because of the large amount of data I accumulated in 2006/2007 and flow of data I continue to receive from contacts in Kirkuk. Additionally, due largely to Article 140 of the Iraqi

Constitution, Kirkuk remains a potential hotbed for future insurgent activity. Analysis of this data through the model mentioned previously will provide empirics to determine if money spent on CERP is really effective in combating insurgency. Finally, Chapter VI will present the key findings, implications and recommendations.

III: THE CHARACTERISTICS OF CERP RECONSTRUCTION PROJECTS

In the previous chapter, I established that successful reconstruction efforts in low-intensity and post-conflict environments are those which are applied in such a manner that they contribute to the neutralization of the incubation and growth of potentially violent social movements. The hypothesis of this research argues the probability that reconstruction efforts will be successful is dependent on the characteristics of reconstruction projects (IV1) compounded by the accompanying message resonance (IV2). The level of analysis is the village or neighborhood level, because this is the level at which the results of a CERP reconstruction project will be felt by all, and also the level at which commanders can most effectively influence behavior.

The focus of this chapter will be on the exogenous factors⁶⁸ with regard to social movement theory—chiefly grievances. It presents those components that are necessary to analyze if CERP reconstruction projects can be used to target the root causes of the grievances that motivate parts of the population to gravitate toward collective violent contention as a means of survival. The importance of CERP in this regard cannot be overstated. Jones (2009) describes poverty, corruption and poor governance as the top reasons the Afghanistan population is attracted to insurgency. In a 2006 joint paper produced by the Afghan government, the United States and other international actors the authors concluded widespread poverty and the lack of essential services in rural areas “make people more susceptible to indoctrination and mean that the life of a fighter may be the only attractive option available.”⁶⁹ My first independent variable (IV1)—the characteristics of CERP reconstruction projects, which consists of prioritization based on

⁶⁸ See Figure 2.2 for a comprehensive list of potential exogenous contributors.

⁶⁹ Seth Jones, *In the Graveyard of Empires*, Advance Copy (New York: WW Norton & Co, 2009), 222.

how much a particular village or neighborhood needs a project *and* how much the village or neighborhood deserves the project, is designed to target the exogenous factors of contentious collective action.

The remainder of this chapter will unpack the components of CERP reconstruction project characteristics or IV1, which is comprised of two major components: Needs and Deserve. The Needs are broken down into two sub-components: assessed needs (A_n) and how the people of a village/neighborhood value their needs (T_n). The Deserve component is broken down into two sub-components: Actions and Attitudes. Actions are comprised of the penetration of “Bad guys” into a village or neighborhood (B_{AC}); Tips, which are hotline phone calls or walk-ins notifying counterinsurgents of enemy activity (T_{AC}); and Significant Actions (SIGACTs) in a village or neighborhood (S_{AC}). Attitudes consist of surveyed effectiveness of the criminal justice system (C_{AT}), surveyed effectiveness of the Government (G_{AT}), and surveyed effectiveness of the local Security Forces, both Army and Police (S_{AT}). The results of the needs component will demonstrate who needs what the most. The results of the deserve component will determine where a particular village lies on the spectrum of popular support (Figure 2.5)—do their actions and attitudes demonstrate they are more supportive of insurgents or counterinsurgents and where do we draw the line to determine who receives projects considering the resulting effects that will be garnered. The output of both the needs and deserve components will be a prioritized list, with those villages or neighborhoods that will produce the greatest results in terms of gaining popular support listed at the top.

A. A NOTE ON CERP

Absent the Corps of Engineers and Provincial Reconstruction Teams (PRTs), the Commander’s Emergency Response Program is the only source of money available to ground level military commanders. There is concern on what the purpose of CERP should be. Following approval of the CPA, FRAGO 89 was published on June 19, 2003 enabling commanders to “respond to urgent humanitarian relief and reconstruction

requirements within their areas of responsibility, by carrying out programs that will immediately assist the Iraqi people...”⁷⁰ As the program has evolved with intentionally liberal guidelines for use, inefficiencies and abuses have become apparent—sometimes creating negative effects. On July 15, 2009, Representative John Murtha, Chairman of the House Appropriations defense sub-committee, wrote a letter to Secretary of Defense Robert Gates stating that “A fundamental review of CERP, its purposes, use and scope, is long overdue.”⁷¹ This letter came after the newly opened Caravan Hotel in Baghdad was looted of televisions, computers and furniture as coalition forces turned the completed CERP project over to Iraqi officials. As some officials feared, the availability of the funds to commanders may actually be too wide. The title of the CERP standard operating procedure manual for U.S. security forces is “Money as a Weapon System,” however, under the purpose for the utilization of CERP funds it only mentions humanitarian relief and employment generation.⁷² There is absolutely no mention of the influence of CERP expenditure on the security environment. There are, however, those who have realized the value of using CERP funds for reconstruction, such as General Peter Chiarelli, and the utilization of the program has evolved to support more than just immediate, small-scale provisions. In congruence with Helmus, Paul, and Glenn (2007), the written guidance of the most commanders in Iraq now states that CERP is to be used by commanders as a tool to gain positive effects in the area of operations.⁷³

CERP is the type of reconstruction this research focuses on because of the ability it provides military commanders in influencing the security environment. With the primary responsibility of security in low-intensity and post-conflict environments, commanders possess CERP funds as a resource toward achieving the same end. Security

⁷⁰ Mark Martins, “The Commander’s Emergency Response Program,” *Joint Forces Quarterly*, 37 (2005): 47.

⁷¹ Ernesto Londono, “U.S. ‘Money Weapon’ Yields Mixed Results,” *Washington Post*, July 27, 2009. <http://www.washingtonpost.com/wp-dyn/content/article/2009/07/26/AR2009072602833.html>.

⁷² Multi – National Corps Iraq, “Money as a Weapon System,” 10, <http://usacac.army.mil/cac2/call/products.asp> (accessed May 17, 2009).

⁷³ Todd Helmus, Christopher Paul and Russell Glenn, “Enlisting Madison Avenue: The Marketing Approach to Earning Popular Support in Theaters of Operation (Santa Monica: RAND Corporation, 2007), 138.

and development are clearly interdependent and CERP should be used in a manner that capitalizes on this interdependency. Most reconstruction practitioners will hesitate to fully implement their reconstruction apparatus until the security environment becomes permissive. CERP defeats this problem and in the early stages of intervention, it is the most available and potentially most effective source of reconstruction funding.

B. THE PRIORITIZATION OF NEEDS

As presented in the previous chapter, there has been a vast amount of research dedicated to the prioritization of reconstruction projects. Lindberg (2008) developed a “Critical Infrastructure Portfolio Selection” to weigh project costs and construction risks in line with military lines of operation (LOO’s). Timilsina (2006) used cases of post-conflict reconstruction in Cambodia, Mozambique, and Haiti to evaluate the effectiveness of reconstruction prioritization through lessons learned and developed a framework for the future application of the lessons learned.⁷⁴ However, the research conducted in these cases, and many similar others, are focused narrowly on the provision of reconstruction and the most efficient, market minded optimization for such efforts. Put more simply, they attempt to provide the largest amount of people with resources as possible with the minimal amount of money possible. The prioritization of reconstruction may be significantly more complicated, and in the case of CERP reconstruction, the prioritization is arguably more important due to the intimacy spending has with the security environment. The careful application of reconstruction projects, as with all decisions made by a commander, fully takes into account all the ancillary positive and negative effects of project construction types and location. The positive effects mentioned here are those concerning an increase in the quality of life of the indigenous population, but also those effects that influence the security environment.

This section discusses the sub-components of the needs component. Needs is broken down into two sub-components: the assessed needs of a village/neighborhood (A_n) and the

⁷⁴ Anga Timilsina, *Getting the Policies Right: The Prioritization and Sequencing of Policies in Post-Conflict Countries* (Santa Monica: RAND, 2006).

importance a village/neighborhood places on a particular need according to Maslow (T_n). A compounding of these sub-components will most truly depict how much a village needs projects and how much they feel like they need projects. Let us first unpack A_n .

1. Assessment of Needs (A_n)

Knowledge Management is a key to understanding and exists to help commanders make informed, timely decisions despite the complexity inherent in stability operations.⁷⁵

—The U.S. Army Stability Operations Field Manual (FM3-07)

Understanding is a fundamental component to planning. In planning for the manipulation of the security environment, assessing the needs of a target population is a relatively obvious, yet essential task in developing an understanding. The assessment is something that is foundationally necessary for both civilian reconstruction agencies and security forces. The actual conduct of the assessment is minimally resource intensive. Assessing a village or neighborhood requires little more than visual evaluation, or at most brief solicitation from the population. Security forces are quite good at assessing what the people of a village or neighborhood need, when they conduct assessments. Realistically, however, most coalition force units will not consider assessing the needs of a village or neighborhood a top priority. The U.S. Army Counterinsurgency Field Manual states that the development of plans and decision making is facilitated through an understanding of the operational environment.⁷⁶ The manual then discusses several tools that can be used to assist in a commander's understanding of the operational environment. A standard village assessment is not one of those tools. As was established previously, security and development are interdependent. The complexity of low-intensity conflict environments significantly blurs the lines between these two functions. Thus, the assessed status of a village or neighborhood perhaps should be of concern for security forces.

⁷⁵ U.S. Army, *The U.S. Army Stability Operations Field Manual* (Ann Arbor: The University of Michigan Press, 2009), 4–7.

⁷⁶ U.S. Army, *Counterinsurgency Field Manual* (Chicago: The University of Chicago Press, 2007), 305.

Essential services prove quite easy to assess because it is not typically necessary to engage in dialogue to determine a status. Several worksheets are available to quickly and effectively record statuses on the degree to which an essential service works or on the condition of a structure; which could actually be a problem. While different forms of assessments may lead to similar answers, they may not promote continuity across the range of agencies involved in reconstruction.

Appendix A contains an example village assessment form. It was adapted from a U.S. Army Corps of Engineers infrastructure reconnaissance assessment form.⁷⁷ The status of a particular need can range from non-existent with an assigned weight of four, to 100% operational with an assigned weight of one—meaning those services in the worst shape are weighted the highest and those in the best shape are weighted the lowest. Thus, the Assessed status of a village or neighborhood’s needs, or A_n , can take on a value from worst to best of 4-1. In Appendix A, the statuses are represented left to right from best to worst. A snapshot is shown here in Figure 3.1.

VILLAGE ASSESSMENT FORM				
AREA	GREEN	AMBER	RED	BLACK
FOOD SUPPLY	GOVERNMENTAL FOOD DISTRIBUTION IS 100% FUNCTIONAL AND RELIABLE	GOVERNMENTAL FOOD DISTRIBUTION IS FUNCTIONAL, BUT NOT ALWAYS RELIABLE	GOVERNMENTAL FOOD DISTRIBUTION SYSTEM EXISTS, BUT IS NOT FUNCTIONING	NO GOVERNMENT FOOD DISTRIBUTION SYSTEM EXISTS
	FOOD IS FRESH AND 100% CONSUMABLE	MOST OF THE FOOD IS FRESH AND CONSUMABLE	SOME OF THE FOOD IS CONSUMABLE, MOST IS SPOILED	FOOD IS COMPLETELY SPOILED AND CANNOT BE CONSUMED
WATER	WATER DISTRIBUTION WORKS IN 100% OF BLDGS	WATER DISTRIBUTION WORKS 50% STRENGTH, SOME LEAKS	WATER DISTRIBUTION DOES NOT WORK	NO WATER DISTRIBUTION LEFT, DESTROYED
	TESTED AS CLEAN OR TOLD BY LOCALS CLEAN	APPEARS CLEAN, NO SMELL	DOES NOT APPEAR CLEAN	CONTAMINATED WATER, SMELLS
HOUSING	100% VILLAGE PEOPLE HAVE SHELTER	GREATER THAN 75% VILLAGE PEOPLE HAVE SHELTER	GREATER THAN 50% VILLAGE PEOPLE HAVE SHELTER	LESS THAN 50% VILLAGE PEOPLE HAVE SHELTER
	RESIDENCES ARE STRUCTURALLY SOUND AND OFFER PROTECTION FROM THE ENVIRONMENT	RESIDENCES ARE DAMAGED, NEED STRUCTURAL EVAL; LIMITED PROTECTION FROM ENVIRONMENT	RESIDENCES ARE DAMAGED; NOT STRUCTURALLY SOUND; SHOULD NOT BE OCCUPIED	RESIDENCES DESTROYED; NOT HABITABLE
POWER	POWER SYSTEM WORKS; BLACK OUTS ARE PLANNED	POWER SYSTEM WORKS; BLACK OUTS UNPLANNED	POWER SYSTEM NOT RELIABLE, BROKEN	POWER SYSTEM DESTROYED
	ELECTRIC LINES ARE UP 100%, NO DAMAGE, NO ENERGY LOSS	ELECTRIC LINES ARE UP AT LEAST 50%, SOME DAMAGE, SOME LINE DETERIORATION, CAN'T DETERMINE POWER LOSS	GREATER THAN 50% OF ELECTRIC LINES DOWN; MAJORITY OF LINES DETERIORATED; POWER LOSS SEEN	ELECTRIC LINES ARE ALL DOWN, HOT WIRES; POWER LOSS
	POWER GRID STATION INTACT; SECURABLE	POWER GRID STATION WORKING; NOT SECURABLE	POWER GRID STATION NOT WORKING; NOT SECURABLE; LOOTED	POWER GRID STATION STRIPPED; DESTROYED

Figure 3.1. Sample of Village Assessment Form

⁷⁷ U.S. Army Corps of Engineers, *The SWEAT/IR Book: Infrastructure Reconnaissance* (Ft Leonard Wood, MO: USAES, 2005), 18–19.

Note that the village assessment in Appendix A contains two basic categories: the first half is on the status of basic essential services and the second half is on the atmospherics and attitudes of village personnel, as well as specific village data (population size and ethnicity, number of houses, # employed, etc.). These questions can fluctuate to gain insight on various topics of concern for a commander and will be covered in more detail upon discussion of the deserve component of IV1. This particular village assessment has a total of 30 questions to evaluate the status of needs. Each question can receive a score from 1–4 and subsequently, each village or neighborhood receives a total combined A_n score that can range from 30–120. A higher score is indicative of a village or neighborhood more in need. Next, it is necessary to determine how a village/neighborhood values their needs.

2. The Value of Needs (T_n)

It can be difficult for the counterinsurgent to fully understand the priority of needs for a different culture, as many needs are circumstantial. For example, Iraqis would likely view electricity as more important than complete security or public safety, especially since their history has forced them to become accustomed to violence. It is extremely important to note that not all villages or neighborhoods in a certain geographic area may perceive their needs with the same importance. Again, in developing a comprehensive understanding of the local people, the population must be queried to enable a commander to maximize the incentive value of each action.

As previously discussed, Maslow's hierarchy of needs demonstrates the priority of human needs.⁷⁸ Most low-intensity and post-conflict societies lack the most basic of needs: physiological and safety. Analysis of an indigenous society's perception and prioritization of physiological/safety needs is paramount in determining how to weight the incentive of reconstruction.

⁷⁸ See Figure 2.1.

The value of using indigenous perception in the prioritization of needs resides in the incentive nature of reconstruction projects. With the argued goal of CERP reconstruction projects being the influence of a target population through fund expenditure, understanding how a population places value on the various needs will provide insight on how to most significantly influence the target population. Put simply: we must maximize incentive. The more the characteristics of the village or neighborhood are understood, the more incentive can be generated. Another look at Figure 2.4, from Chapter II, demonstrates the Kirkuk, Iraqi point of view.

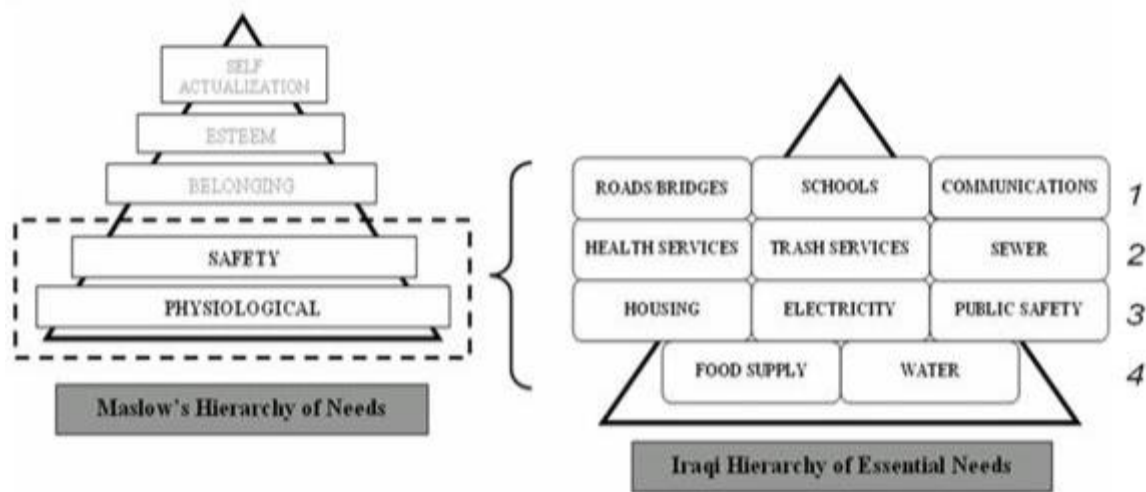


Figure 2.4. Example of Weighted Priority of Needs for Kirkuk Iraqis

The needs are tiered and weighted from the bottom, with food and water being the most important at a value of four, and roads/bridges, schools and communications being least important with a value of one. For this research, the Tier of needs, or T_n , can take on a value from most important to least important of 4–1, as depicted in Figure 2.4. Every project should seek to maximize the incentive value that resides at the project location based on the hierarchy of needs. It is critical to note that the hierarchy can vary by village/neighborhood and the value a village or neighborhood places on particular needs can vary over time due to external circumstances. The better the population is known from the bottom up, the more accurately the indigenous priority of needs can be assessed—and the stronger the incentive of projects will be.

With the village assessment shown in Appendix A, there are 30 questions that can each be weighted with a value from 1–4, with 4 being the most important in the eyes of the population. Again, it is possible that different villages or neighborhoods could place different values on the same needs. The appropriate sampling is necessary to ensure maximized effects.

3. Summary of Needs Components

Both components for determining the needs of a population, assessment and indigenous perception of value, are vital to the prioritization process. Reconstruction projects are often developed with minimal consideration of either component, especially at the CERP level where commanders have the liberal authority to spend as they deem necessary. Only through consideration of the compounding effect of both components will a commander be able to most effectively influence the local security environment and incentivize progress.

The mathematical representation of a village's needs is as follows:

$$\sum A_n * T_n$$

A_n represents the Assessed status of services in a particular village or neighborhood with values 4–1 (worst condition to best condition), and T_n represents the Tier of the need represented in the weighted hierarchy with values 4–1 (most important to least important). With the 30 questions in the village assessment presented in Appendix A, the numerical output range of village considering both A_n and T_n is from 30–480. This output will generate a numerically based list profiling those villages that are truly most in need to least in need.

An accurate assessment and insight into the perceived value a population places on needs are necessary for prioritization, but they only constitute a portion of the equation. Again, the importance of CERP reconstruction projects resides in their ability to influence the security environment. Thus, in addition to the needs components

mentioned above, behavioral indicators of the current security environment are needed to determine the effects past reconstruction projects have had and predict how future projects may differently influence the future security environment.

C. THE DESERVE COMPONENT

Any condition or event which can be shown to have an effect upon behavior must be taken into account. By discovering and analyzing these causes we can predict behavior; to the extent that we can manipulate them, we can control behavior.⁷⁹

—B.F. Skinner, 1953

Those involved in any type of warfare are fundamentally concerned with ways to understand, predict and control behavior. Security forces simply would not have a job if people behaved in a non-violent or non-threatening manner. An understanding of the operational environment, that both the U.S. Counterinsurgency and Stability Operations Field Manuals discuss, is critical because it enables a commander to most effectively control behavior. Lethal targeting is one method used to control extreme behavior. CERP reconstruction is another tool that can be used to control behavior, if it is applied properly. Helmus, Paul and Glenn (2007) argue this point well, stating that Civil Military Operations (CMO) and CERP funds can be used or withheld to encourage civilian behaviors that are key to counterinsurgency success.⁸⁰

This section presents those factors that serve as effective indicators for assessing where a village or neighborhood's level of support lies on a spectrum between insurgents and counterinsurgents. It will first unpack the subcomponents reflective of a village's actions, and then the subcomponents reflective of a village's attitudes. The section

⁷⁹ B.F. Skinner, "Behaviorism," Indiana University Purdue University Indianapolis (IUPUI) <http://www.iupui.edu/~philosop/skinnerbehaviorism.pdf>.

⁸⁰ Todd Helmus, Christopher Paul and Russell Glenn, "Enlisting Madison Avenue: The Marketing Approach to Earning Popular Support in Theaters of Operation (Santa Monica: RAND Corporation, 2007), 139.

culminates with the interaction between actions and attitudes to determine where a village falls on the spectrum of popular support, and how the deserve component plays into the prioritization of reconstruction projects overall.

To date, most CERP projects, and most types of reconstruction for that matter, are completed simply based on the need component; and even then only the assessed need (A_n). Not only do the projects need to be weighted based on their level of perceived indigenous prioritization, but projects should seek to maximize the incentive value that resides differently at every location. The role of incentive is powerful in determining the value a target population places on their needs, but it is even more powerful in the evaluation of how the provision of services will influence a target population to support or deny support for a potentially violent social movement.

As Kriesberg (2007) states, “The conventional understanding among many partisans and observers of conflicts is that [violent] coercion is needed to induce an adversary to change its will.”⁸¹ This type of thinking is absent of the recognition of the importance of the population, especially in the three countries where CERP available. Kriesberg posits three types of inducements or incentives: coercion, reward, and persuasion.⁸² The use of CERP reconstruction projects directly contributes to the reward incentive. Commanders in possession of CERP funds have the ability to incentivize popular support by rewarding those villages or neighborhoods who deserve reconstruction projects.

As already discussed, the Iraq CERP Standard Operating Procedure (SOP) book is entitled *Money as a Weapon System*. Although the purpose of CERP as stated in the book is little more than to provide urgent humanitarian relief and job creation, CERP truly does have potential as a “weapon” or a tool in gaining the support of the population. With combatant commanders primarily concerned with security and stability, CERP should be used as a tool toward achieving the desired end state of greater security and stability. The

⁸¹ Louis Kriesberg, *Constructive Conflicts* (Lanham: Rowman & Littlefield, 2007), 95.

⁸² Louis Kriesberg, *Constructive Conflicts*, 96.

portion of the population from which a commander can achieve the greatest amount of positive effects in terms of gaining security and stability was represented in the “Area of Focus” portion of Figure 2.5, shown again below.

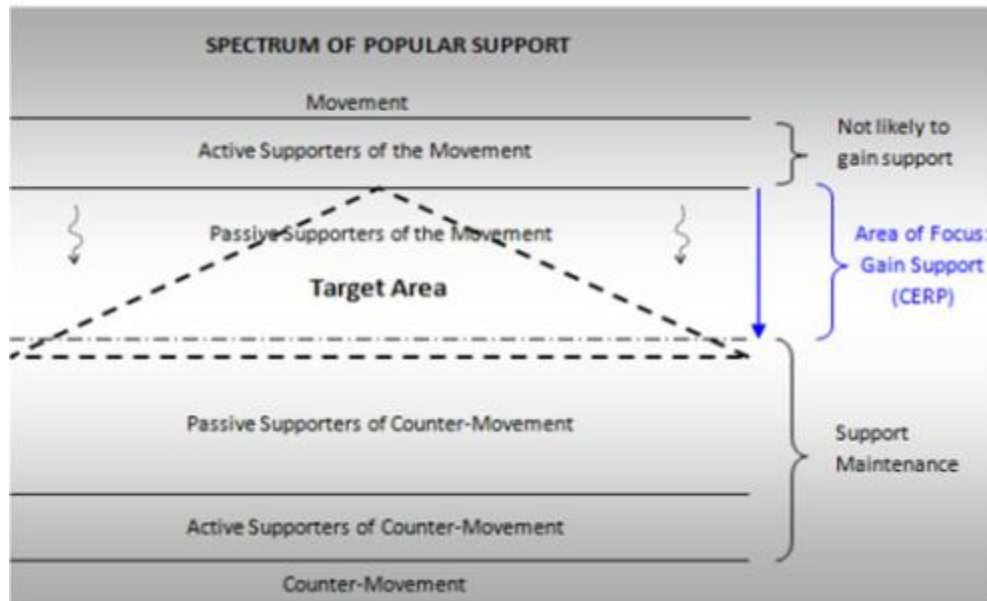


Figure 2.5. The Spectrum of Popular Support and Area of Focus for CERP Reconstruction.

Passive supporters of the movement constitute the portion of the population that CERP can most beneficially affect. Therefore, the measures for optimization should be weighted based on the probability that a particular project will gain support from this part of the population. The portion of the population closer to the mid-line is weighted higher (1). Those closer to being active supporters of the insurgency are less likely to support counterinsurgents and thus receive a low score (0).

Clearly, the need to provide basic needs and services exists at all levels and once support is gained by a certain population, it is vital that the support is maintained. However, to gain support, CERP money should be focused on that portion of the population where support does not already exist. This reasoning does not marginalize maintenance of support from that portion of the population on the bottom half of Figure 2.5, it simply focuses the spending of CERP as a tool against insurgency. There are

numerous other funds that can and should be focused toward support maintenance. I-CERP (Iraqi-CERP which are funds nearly identical to CERP but delegated to Iraqi Security Forces), provincial and donor funds should all be tied into support maintenance. Support maintenance projects should target Maslow's higher level belonging, esteem and psychological needs, as the safety and physiological needs would likely already have been fulfilled.

It is important to note that although CERP funds should be focused toward gaining support of the part of the population mentioned above, commanders must maintain the flexibility to quickly draw on CERP to prevent a village or neighborhood's migration back across the center line in support of an insurgency. Situations such as this and other "flashpoint" concerns, in which a commander may have greater positive effects by adjusting his prioritization of projects to resolve a dispute of an immediate nature, demonstrate the kind of elasticity that must be present to ensure success.

1. Sub-Components of the Deserve Component

Bruce Gilley uses the terms *Actions* and *Attitudes* as indicators of a population's perception of state legitimacy.⁸³ The terms also provide a useful way to think about how much a village or neighborhood deserves to receive CERP reconstruction assistance based on their level of support for a movement. The following sections will unpack the indicators for village's Actions and Attitudes. The proper consideration of all applicable indicators and the appropriate weighting of the indicators is crucial to maximizing the incentive nature of CERP projects through the provision to that part of the population most deserving.

a. Actions

There are three sub-components that frame the Action component: the penetration of "bad guys" into a village or neighborhood (B_{AC}), the amount of tips that a

⁸³ Bruce Gilley, *The Right to Rule* (New York: Columbia University Press, 2009), 13.

village or neighborhood provides to governmental or security forces (T_{AC}) and SIGACTs in or around a village or neighborhood (S_{AC}). These sub-components are in order of hypothesized weight, with the B_{AC} being the most important with a value of (3) and the S_{AC} being the least important with a value of (1). However, the model will evaluate the weighting of each of these factors differently to determine applicability. B_{AC} , T_{AC} and S_{AC} fall between the value of (0) and (1).

B_{AC} is determined through link analysis, wherein High Value Individuals (HVIs) and emerging HVIs are linked to their base of support. This element demonstrates the necessity of cross agency coordination and information sharing. The intelligence apparatus is a valuable contribution to the proper prioritization of CERP reconstruction projects. Data in this regard can emerge through numerous conduits, but should be properly filtered through formal intelligence channels to ensure the highest degree of validity. Once this data is in hand, it is difficult to refute intelligence depicting villages or neighborhoods that harbor and support HVIs and potential HVIs. B_{AC} is numerically derived in this research based on three separate and non-redundant data sets: the U.S. Brigade top 15 HVIs, U.S. Brigade Emerging HVIs, and Iraqi Army HVIs. These data sets are weighted from first to last in order of importance. The current top 15 HVIs are listed as more of a threat to security than the emerging HVIs, who are more of a threat than the Iraqi Army HVIs. Again, no one individual falls into more than one category.

T_{AC} is determined through data acquired by Joint Security Stations (JSSs), Joint Coordination Centers (JCCs) and coalition or indigenous force personnel. Each of these entities operates a “hotline” to which anonymous callers can report suspicious activity. Additionally, each of these entities receives “walk-ups” where civilians will casually inform security forces of suspicious activity. This data represents a particular population’s willingness to share information with governmental or security forces. Those villages that are more willing to share information about the security environment with counterinsurgents are represented here as more deserving of CERP reconstruction.

The tips data have one major—information on the reliability of tips is not available. An ideal dataset would consider the number of tips and reliability of those tips to truly indicate a village's level of support.

S_{AC} is determined through U.S. and indigenous security force data on Significant Actions. Every SIGACT in combat areas is recorded in as much detail as possible to allow for trend identification and further analysis. SIGACTs are an important sub-component, as trends can show violence “hotspots” where violent movements are permitted by the population to conduct anti-government operations. This is the variable that is most often looked at with regard to any establishment of a cause and effect relationship. Commanders and academics alike often gauge a decision on how it affects subsequent SIGACTs. This research uses Iraq SIGACT data from January 2004—October 2009. SIGACTs are linked to the nearest village or neighborhood to show a population's willingness to support or accept violence.

B_{AC} , T_{AC} , and S_{AC} are all in the form of numbers per village. To analyze the combined effect of these factors, they must be mathematically transformed through some form of normalization. In the study of quantitative strategic decision making, Kirkwood (1997) developed an evaluation measure to overcome the problem of differing units used for measurement when multiple criteria are involved.⁸⁴ This process creates an output that is not the actual evaluation measure score that each sub-component received, but rather the proportion of the way along the allowed range of that evaluation measure scale where the score for the sub-component lies.⁸⁵ The formula used for an evaluation measure where higher scores are more preferred is as follows:

$$(1) \text{ Rating} = \frac{\text{Score} - \text{Lowest}}{\text{Highest Score} - \text{Lowest Level}}$$

⁸⁴ Craig Kirkwood, *Strategic Decision Making: Multiobjective Decision Analysis* (Belmont, CA: Wadsworth Publishing, 1997), 57–58.

⁸⁵ Ibid.

Likewise, for an evaluation measure where lower scores are preferred (like SIGACTs) the following formula is used to calculate the normalized value.

$$(2) \text{ Rating} = \frac{\text{Highest Level} - \text{Score}}{\text{Highest Level} - \text{Lowest Level}}$$

Figure 3.2 serves as an example for determining the normalized value for SIGACTs. In the case of SIGACTs, a lower value is more preferred. Thus, Equation (2) above will be used. In this case, let us consider six fictitious villages with the following number of SIGACTs: 2, 15, 135, 142, 188, and 211. To determine the normalized value $[v(x)]$ for the fourth village, we run the raw number (142) through Equation (2) above. The result (0.33) is depicted in Figure 3.2.

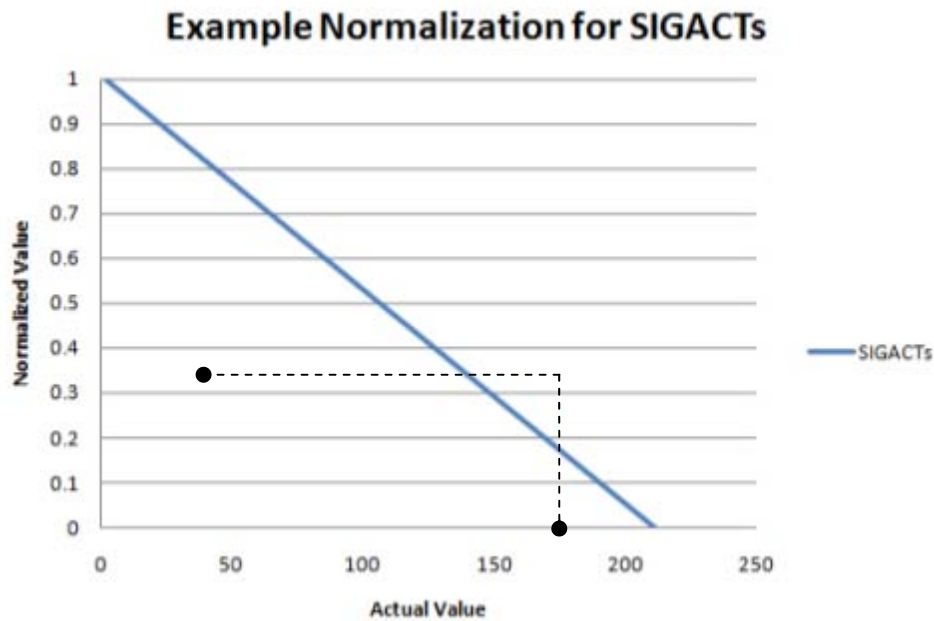


Figure 3.2. Graphical Depiction of Normalization Process

Following the normalization of all the Action (A_{CT}) sub-components, it is assumed that all sub-components are of equal weight. Subsequently, SIGACTs would be represented with the same value as HVIs. This becomes problematic for analysis and determining which factors are most telling. Thus, the use of weights is preferred to

determine which factors are actually most influential. Each sub-component will receive a weight and the sum of all weights will equal 1. The weights for each sub-component are varied to determine which weighting produces the most influential outcome. The final form of the equation for Actions (A_{CT}) is as follows.

$$A_C = w(B_{AC})v(B_{AC}) + w(T_{AC})v(T_{AC}) + w(S_{AC})v(S_{AC});$$

$$\text{where } w(B_{AC}) + w(T_{AC}) + w(S_{AC}) = 1.0$$

The actions of a village or neighborhood go a long way in determining their level of popular support. While these three Action sub-components are necessary, they are not sufficient in the analysis of how CERP reconstruction projects will affect a population. Further consideration in the category of attitudinal indicators is needed.

b. Attitudes

The attitudes component consists of four sub-components for most effectively gauging the average attitude of a village or neighborhood. For this research, the attitudes are derived from the same village assessments that were used for evaluating needs. The attitude component (A_T) consists of: surveyed confidence in the Criminal justice system (C_{AT}), the confidence in the abilities of the Government (G_{AT}), the ability of the local Army (A_{AT}) and the ability of local police forces (P_{AT}). The village assessments use a scale of (4) to (1) to rank the opinions of a population with regard to their confidence in the abilities of each of the entities. A score of (1) means a village has complete confidence and a (4) means they have no confidence. In other words, a score of (1) means that the village perceives the criminal justice system, government or security forces as adequate.

In the study of gang behavior, Akerlof (1997) stated that perception of fairness of the criminal justice system (lack of corruption, etc.), and attitudes toward local security and government officials concerning the criminal justice system significantly influence the willingness of a community to share information on gang (insurgent)

activities.⁸⁶ The three indicators used to assess a population's attitude in support of the deserve component of this research are designed to assess the willingness of a community to share information.

The first sub-component, C_{AT} is an extremely important consideration. A particular population is only going to share information on violent social movement activity if they believe that the criminal justice system is capable of protecting them from the individuals they shared information on. If an insurgent is arrested and then released because of corruption or some other reason, retribution is going to be one of the insurgent's top priorities. This becomes even more important with higher level, more powerful criminals. The cost to benefit ratio for a villager is of constant consideration. An assessment of the C_{AT} sub-component helps determine if a village or neighborhood would share critical information if they were able.

G_{AT} is the surveyed confidence in the elected government – local, provincial and national. A population's satisfaction with the government links directly back to basic counterinsurgency and social movement literature. If a population possesses a grievance, or has experienced some sort of social injustice or repression, they are more likely to support an opposing strategy. An insurgency that steps in with aims to oppose the existing governmental norms will gain support from such disaffected populations. Thus, a village or neighborhood's level of confidence in the elected government is indicative of their willingness to support them.

Finally, A_{AT} and P_{AT} reflect a population's perception of both the Army and Police forces in their area. The Army and Police are those authority figures that villagers are most likely to come into contact with and also those who are primarily responsible for local security. If a village doesn't have confidence in the abilities of those who are charged to protect them, they are going to put their support wherever necessary

⁸⁶ George Akerlof and Janet Yellen, "Gang Behavior, Law Enforcement, and Community Values," in *Human Well Being and Economic Goals*, 220–223 (Washington D.C.: Island Press, 1997), 222.

to ensure survival. The context determines if survival requires more active or passive support for either side. More confidence in security forces is thus indicative of higher willingness by a village to share information with them.

C_{AT} , G_{AT} , A_{AT} and P_{AT} are all represented in numerical values of 1-4 derived from the village assessments. To enable the compounding relationship between the Attitude (A_T) sub-components and the Action (A_C) sub-components, the A_T components must be normalized and weighted in the same fashion exhibited with A_T in the preceding section. An example normalization for C_{AT} values from six villages with values 1, 2, 2, 2, 4, and 4 is shown in Figure 3.3.

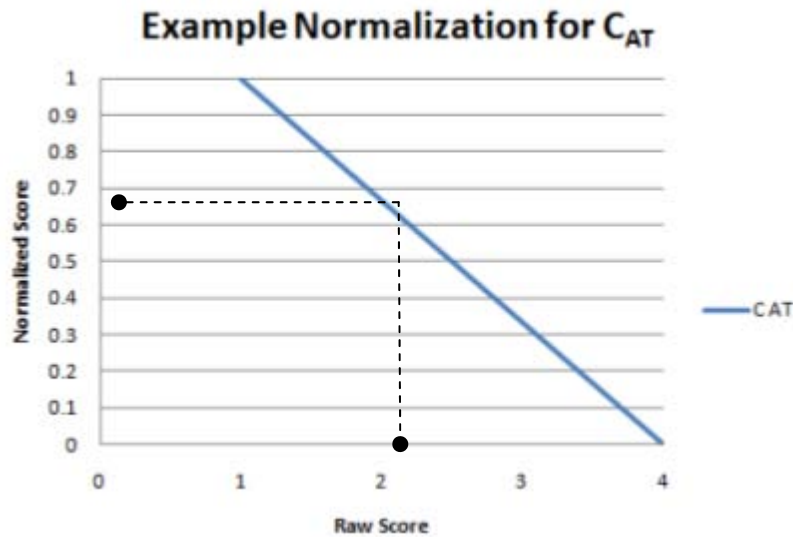


Figure 3.3. Graphical Depiction of the A_T Normalization Process

Following the normalization of all the Attitude (A_T) sub-components, the same consideration must be taken as with the weights on A_C . All A_T factors do not likely provide the exact same level of influence. Thus, the use of weights is again preferred to determine which factors are actually most influential. Each sub-component will receive a weight and the sum of all weights will equal 1. The weights for each sub-component are varied to determine which weighting produces the most influential outcome. The final form of the equation for Attitudes (A_T) is as follows.

$$A_T = w(C_{AT})v(C_{AT}) + w(G_{AT})v(G_{AT}) + w(A_{AT})v(A_{AT}) + w(P_{AT})v(P_{AT})$$

$$\text{where } w(C_{AT}) + w(G_{AT}) + w(A_{AT}) + w(P_{AT}) = 1.0$$

2. Summary of Deserve Component

When considering the combination of AC and AT, it is important to note that AC and AT themselves may influence the result differently and should thus also receive weights. The resulting mathematical representation of how much a village/neighborhood deserves to receive a particular project is as follows.

$$A_C * A_T \text{ or}$$

$$[w(A_C)w(B_{AC})v(B_{AC}) + w(A_C)w(T_{AC})v(T_{AC}) + w(A_C)w(S_{AC})v(S_{AC})] \times$$

$$[w(A_T)w(C_{AT})v(C_{AT}) + w(A_T)w(G_{AT})v(G_{AT}) + w(A_T)w(A_{AT})v(A_{AT}) + w(A_T)w(P_{AT})v(P_{AT})]$$

Where:

$$w(A_C) + w(A_T) = 1.0 \text{ and}$$

$$w(B_{AC}) + w(T_{AC}) + w(S_{AC}) = 1.0 \text{ and}$$

$$w(C_{AT}) + w(G_{AT}) + w(A_{AT}) + w(P_{AT}) = 1.0$$

Equation 1. Deserve Indicator

The results of this equation will determine where a village/neighborhood lies on the spectrum of popular support (Figure 2.5). The deserve component should be prioritized according to Figure 2.5, with those passive supporters of an insurgency receiving a higher priority. Those closer to being active supporters of the potentially

violent social movement will receive a lower priority, and therefore receive projects as a last resort. The results of this component, taken with respect to the needs component will have the most lucrative effects of CERP reconstruction projects on the security environment.

D. SUMMARY

The model presented here should be useful to determine the effects of CERP reconstruction projects on insurgency. Current research depicting the seemingly minimal effects of reconstruction on the security environment is resultant of the ineffective application of reconstruction projects. The prioritization of all reconstruction projects has largely failed to take into account the incentive value of the projects. The use of the indicators presented in this chapter is particularly important in this regard.

The true value of reconstruction as it relates to insurgency according to the mathematical representations noted in this chapter will prove extremely beneficial for the drawing of prescriptive implications in post-conflict societies. Accurate collection of data on all four needs sub-components and all six deserve sub-components will provide the most formative understanding available for decision making. While all the characteristics of CERP reconstruction (IV1) presented in this chapter are necessary and important in understanding, predicting and controlling the behavior of a population, they do not by themselves determine the success of CERP reconstruction as defined in the introduction of this chapter. A second independent variable is necessary to counter enemy strategic frames that serve as the endogenous, transforming factors in a social movement's progression toward violence. Harnessing the power of the message that accompanies reconstruction projects provides the potential for even greater effects.

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IV. THE ROLE OF THE MESSAGE IN POST-CONFLICT RECONSTRUCTION

The message that accompanies a particular reconstruction project can be extremely powerful and should be considered a required component for project completion. It can be argued that a moderate project with an excellent message is better than an excellent project with no message. Getting the word out about project planning, construction and completion is extremely valuable to negating all stages of movement progression. The incentive value of reconstruction projects—especially CERP projects can be used to affect parts of the population other than just those receiving the physical benefits of the project. This chapter provides insight into the importance of the message with regard to reconstruction and the potential areas for the progression of insurgency if the message is not applied properly.

This chapter will begin with an analysis of the opportunities available for messages through CERP reconstruction. Next, it will analyze who the target audience of the message is and why. This chapter will then assess why the message is effective in combating an insurgency according to social movement theory. Social movement theory assists in depicting the importance of understanding enemy strategic frames to increase counterinsurgent message resonance. Finally, this chapter discusses how the potential for a message to spread with regard to reconstruction can be quantified for analytical application. The messages accompanying a project will determine the strength of the project's effect on combating the movement.

A. THE OPPORTUNITY: HOW DOES THE RECONSTRUCTION MESSAGE CONTRIBUTE TO SOCIAL MOVEMENTS?

To understand the role the message plays with regard to reconstruction and its relationship with social movements, one must define the “message” and information operations (IO). With regard to an insurgent or low-intensity conflict environment, I define the message as information that is transmitted from the counterinsurgent to a

receiver either verbally or nonverbally. The receiver, or target, of the message can vary depending on the effects one is trying to achieve. According to the U.S. Army Information Operations Field Manual (3–13), information operations is the employment of the core capabilities of electronic warfare, computer network operations, psychological operations, military deception, and operations security, in concert with specified supporting and related capabilities, to affect or defend information and information systems, and to influence decision making.⁸⁷ Put more simply with regard to the message, information operations are those efforts that facilitate development, synchronization and distribution of messages.

Based on the literature, one would posit that the message and IO do not relate much at all to reconstruction. However, the level of resonance of a message accompanying a reconstruction project directly affects the actions of surrounding populations. The actions (or inactions) of surrounding populations dictate how much they deserve to have their needs fulfilled.

Very little emphasis has been placed on the role of information operations in contributing to reconstruction efforts. Counterinsurgency expert John Nagl, contributing author to the U.S. Army Field Manuals for Stability Operations (3–07) and Counterinsurgency (3–24), states that IO is the most important line of effort in a counterinsurgency.⁸⁸ Information operations must be present in each line of effort for stability to be achieved and for the counterinsurgency to be successful. GEN Peter Chiarelli does arguably the best job at portraying the importance of IO in reconstruction:

Shaping the message and tying that message to operations is as important, if not more so, to the desired individual effect as the previous five lines of operations. Understanding the effect of operations as seen through the lens of the Iraqi culture and psyche is a foremost planning consideration for every operation.⁸⁹

⁸⁷ U.S. Army, *Information Operations* (Washington: U.S. Army, 2003), iii.

⁸⁸ John Nagl, “Irregular Warfare,” Naval Postgraduate School, May 12, 2009.

⁸⁹ Peter Chiarelli, *Winning the Peace: The Requirement for Full Spectrum Operations*, 14–15.

GEN Chiarelli goes on to say that insurgents well know the value of information operations on counterinsurgency efforts. As stated previously, the message and information operations can contribute in a compounding manner to the perception of the population.

1. Incentive/Inducements

The incentive nature of reconstruction projects is what makes them so conducive to messages or information operations. As Kriesberg (2007) states, “The conventional understanding among many partisans and observers of conflicts is that [violent] coercion is needed to induce an adversary to change its will.”⁹⁰ This point is echoed through the fact that coalition forces in Afghanistan refused to even acknowledge the insurgency as late as 2006. Unit commanders were actually told not to use the word *counterinsurgency* because they were only supposed to be conducting counterterrorist operations under the operational focus of fighting Al Qaeda.⁹¹ Thankfully, today there is a much better understanding that non-lethal methods can be used to assist in the fight against an insurgency. Reconstruction is one of those methods, and for maneuver commanders CERP exists as a means.

There are three basic types of incentives or inducements: coercion, reward, and persuasion.⁹² Coercive inducements can be either threatened or applied and violent or nonviolent. Although all three types of inducements can occur simultaneously, more applicable to this situation are reward and persuasive inducements. Kriesberg indicates that offering a reward for compliance can be more effective and precise than punishing for noncompliance.⁹³ Further, rewards are more likely to be effective in the later stages of a conflict than during periods of escalation. When used in conjunction with quality messaging, reward inducements can be quite persuasive. Persuasive inducements can

⁹⁰ Louis Kriesberg, *Constructive Conflicts* (Lanham: Rowman & Littlefield, 2007), 95.

⁹¹ Seth Jones, *In the Graveyard of Empires, Advance Copy* (New York: WW Norton & Co, 2009), 239.

⁹² Louis Kriesberg, *Constructive Conflicts*, 96.

⁹³ Ibid.

influence an opponent by communicating arguments, information or appeals to alter the other side's perception of the conflict.⁹⁴ When thinking of a social movement, it is easy to understand the value of reward and persuasive inducements, and the interplay between. Reconstruction efforts can be thought of as reward inducements and the accompanying messages contribute to the persuasive inducements.

2. Message Validity

Finally, when considering how a message/IO can benefit reconstruction, it is important to acknowledge the need for message validity. When messages are communicated at this stage of the fight, the trust of the population is something that cannot afford to be misguided. Each time interaction occurs between counterinsurgents (and insurgents, but to a lesser degree) and the population, an expectation is developed. If counterinsurgents fail to meet those expectations, trust is lost or degraded.

The message and information operations are clearly applicable and valuable in reconstruction operations. Because reconstruction projects provide for the needs of the population, if prioritized properly, they carry with them an inherent incentive or inducement that can be used by counterinsurgents to reward or persuade popular behavior. On the contrary, poorly prioritized projects carry can be damaging. Upon the completion of a \$74,000 playground in a Kirkuk, Iraq neighborhood, residents were pleased that their children had a place to play, but confused as to why a playground was built when they didn't have running water and raw sewage was running down both sides of the playground.⁹⁵ Such a scenario provides lucrative ground for insurgents to mobilize contentious belief.

B. THE TARGET AUDIENCE

The message accompanying a reconstruction project will typically have multiple targets which can best be understood as concentric circles. Those at the center of the

⁹⁴ Louis Kriesberg, *Constructive Conflicts*, 99.

⁹⁵ This playground was built in the Tiseen neighborhood of Kirkuk city in 2007.

circles constitute the village or neighborhood where the reconstruction project is completed. Those further from the center are those villages/neighborhoods that geographically radiate from the project site. At the outer ring of the circles are those villages or neighborhoods that will only experience project completion through some form of television, newspaper or broad-based media.

As stated in Chapter III, CERP projects should seek to gain support from the local population, which means that portion of the population from which support is not already possessed. Thus, counterinsurgents are not trying to gain support from the entire population, only the part that they don't already have. Passive supporters of the insurgency constitute the portion of the population that CERP can most beneficially affect. Therefore, the measures for optimization should be weighted based on the probability that a particular project will gain support from this part of the population. The portion of the population closer to the mid-line is weighted higher (1), and those closer to being active supporters of the insurgency receive a low score (0).

The recipients of a particular project should be selected based on the probability that the project will gain their support, and thus represent the primary target group for the message. The reason villages or neighborhoods receive these projects is because they are "fence sitters" and the project represents a reward inducement that, along with the persuasion created through the message will work to pull the group over to support the counterinsurgency (whether passively or actively). Messages targeting the fence sitters will occur at the micro-level, demonstrating how the project will impact the lives of those in the village in very real terms. Another reason those physically affected by the project are the primary targets of the message is because these people will actually see and feel the results of the project. Messages with these people will resonate to a very high degree based on the fact that they are actually experiencing the results of the project.

Further from the center of the circle, the meso-level ring consists of surrounding villages or nearby neighborhoods that are also likely to physically talk about the results of project completion. The intent of the message targeting these groups is to penetrate into the deeper, more unsupportive portions of the population in a persuasive manner.

Recipients of these meso-level messages have not yet had their needs satisfied to the degree of those where the project was completed. Verbal and visual recognition of project completion means messages will resonate to a certain degree if the message well depicts the relationship between the preferred behavior of the project recipients and project construction.

The macro-level message recipient is the population at large. These messages consist more of pictures in newspapers and on TV in an attempt to make progress as visible as possible to that portion of the population that is further from the center. Those affected by this message will come from all strata on the spectrum of popular support. The central theme of these messages is progression and reward for positive behavior. Management of the message by counterinsurgents is critical in maximizing the persuasive effects of a reconstruction project.

The final target group of the message is the insurgent or opponent. Messages that target this group should seek to directly discredit those diagnostic, prognostic, and motivational frames that the insurgent is using to perpetuate collective action in that geographic area. After initial completion of a project, the project is at greatest risk for insurgent attack. Messages must be used not only to demonstrate to recipients how an attack by insurgents would impinge on their livelihood, but also potentially to invite insurgents to attack. Counterinsurgents would obviously need to take the appropriate security measures to safeguard the site, knowing the likelihood of attack. Actual attempts by insurgents to destroy something the project recipients have had a chance to taste or feel could help drive a wedge further between the insurgents and the population. An understanding the target populations that messages accompanying reconstruction projects affect assists in depicting how the projects contribute to the counterinsurgency.

C. MESSAGE EFFECTIVENESS ACCORDING TO SMT

Social movement theory is useful in analyzing the effectiveness of reconstruction messages in insurgencies. As stated previously, social movements ultimately seek to develop the capacity to maintain sustained challenges against powerful opponents based

on underlying social networks and resonant collective action frames.⁹⁶ As stated in Chapter II and shown in Figure 2.2, the ability of the message accompanying reconstruction project completion to resonate significantly contributes to the endogenous factors that transform contentious belief into violence.

From an endogenous standpoint, the ability of messages accompanying reconstruction projects to discredit insurgent strategic frames, which are often centered on the poor quality of basic services, gives these projects strength. While the physical reconstruction projects should directly address the root of many popular grievances, the messages should seek to directly discredit the enemy frames. Strategic frames are conscious strategic efforts by groups of people to fashion shared understandings of themselves and the world that legitimate and motivate collective action.⁹⁷ Frames can be diagnostic, prognostic or motivational.⁹⁸ Therefore, an understanding of current enemy frames is critical to maximize the success of messages.

D. QUANTIFYING MESSAGE RESONANCE

Determination of the extent to which the message accompanying a CERP reconstruction project will resonate is clearly context dependent. For this research, I analyze the phenomenon from the micro, meso and macro levels. These three levels with regard to CERP reconstruction can best be thought of according to the following classification:

Micro—Will they see it?

Meso—Will they talk about it? Maybe they don't see it but their neighbors do.

Macro—Will they hear about it, read about it, or watch it?

⁹⁶ Sidney Tarrow, *Power in Movement* (New York: Cambridge University Press, 1998), 2.

⁹⁷ Doug McAdam, John McCarthy, and Mayer Zald, *Comparative Perspectives on Social Movements* (New York: Cambridge University Press, 1996), 6.

⁹⁸ David Snow, Rens Vliegenthart, and Catherine Corrigan-Brown, "Framing the French Riots: A Comparative Study of Frame Variation," *Social Forces* 86, no. 2 (2007): 387.

The remainder of this section will explain how numerical values for each of these levels of message resonance were determined and how the values were situated in the model.

Population densities can be used to determine the extent to which the people of a village will see a project. Epidemiologists use population densities to measure the rate at which an epidemic will spread.⁹⁹ Much like the spread of infectious disease, the denser a population, the more people there are available for infection and the more likely a message is to spread. Identification of the population density at each village will yield a value that will contribute to overall message resonance at the micro-level.

For the meso-level analysis, the proximity of each village to every other village can be used to determine the likelihood that residents of one village would talk about CERP reconstruction projects with another village. It is, therefore, more likely that tightly clustered villages will have a higher exposure to the goings on of a nearby village or adjoining neighborhood than of a distant village. Subsequently, it is unlikely that news of a CERP project completed in a remote village will reach any other village or neighborhood. Thus, building a project in this location will not yield much in terms of influencing violence.

The availability of media comprises quantification of the macro-level. Accurate identification of which media outlets are available and their respective distribution or footprint will determine how far the message will resonate at the macro-level. The most common forms of media are newspaper, television and radio. For newspapers, population sizes can be used to determine which villages will be recipients based on distribution levels. For example, local papers will be distributed to smaller local villages than regional and national newspapers. If the footprints of television and radio stations are known,

⁹⁹ G.P. Garnett, "The geographical and temporal evolution of sexually transmitted disease epidemics," *Sexually Transmitted Infections: Phase Specific Strategies for the Prevention*, from ProQuest Science Journals (accessed December 7, 2009).

buffers can be constructed to incorporate all villages that fall under this known distance. Such buffers must take into account the antenna height and elevation data.

To assemble the results of the media data, each media outlet is given a value of one. If the media outlet was available to the village, the village will receive a score of one for that outlet. If not, the village received a zero. The sum of these scores will determine the extent to which a message will resonate at the macro-level. Villages with a higher score have greater access to media.

Next, the outputs from the micro, meso and macro levels must be normalized in the same manner described in Chapter III. In all of these cases, a higher value is more preferred. Thus, the following equation will be used to normalize these values.

$$\text{Normalized Value} = \frac{\text{Score} - \text{Lowest Value}}{\text{Highest Value} - \text{Lowest Value}}$$

The normalized values can subsequently be summed for a final IV2 output. The results of this output can then be compared to the IV1 values and the DV values for the drawing of prescriptive implications.

E. SUMMARY

With regard to reconstruction projects, the role of the message is extremely valuable. Through recognition of the incentive value of reconstruction projects, prioritization can occur based on the needs of the people as well as how much those people deserve to have their needs fulfilled. The level of resonance of a message accompanying a reconstruction project directly affects the actions of surrounding populations, which are what dictate how much they deserve to have their needs fulfilled. The message capitalizes on the rewarding nature (incentive) of the project for the recipients, as well as the persuasive inducement for those that have the potential to also receive reconstruction benefits. There is no formal mechanism to ensure that appropriate messages accompany reconstruction projects and to target specific recipients for the various purposes necessary to contribute to the counterinsurgency. Therefore,

reconstruction projects are often not nearly as effective as they could be in affecting the insurgency. While the physical effects of reconstruction projects can be applied in a better manner to maximize their rewarding inducement, the messages accompanying these projects are extremely valuable in maximizing the persuasive power of the project. The following chapter will use the At Tameem province of Iraq as a case to test how the needs, deserve, and message resonance components influence the dependent variable.

V. CASE STUDY

A. INTRODUCTION

The purpose of this thesis is, first, to identify if and how much CERP reconstruction has influenced the Iraq insurgency, and then to test a prioritization model to assess which variables most influence insurgency. This thesis uses the At Tameem, otherwise known as Kirkuk, province of Iraq as a case with which to empirically test the influence of CERP on insurgency.

The At Tameem Province of Iraq is located in the northern part of Iraq, with the semi-autonomous Kurdistan region to the north and the Hamrin mountain range to the south. The province is ethnically diverse, populated with Kurds, Arabs, Turkomen, and Assyrian-Chaldeans.¹⁰⁰ Roughly 40% of Iraq's oil production comes from the At Tameem province. The capital city of Kirkuk is home to more than 1 million people and runs rampant with high unemployment and ethnic tension. For historical, political and economic reasons, the various ethnic groups continually compete for control of the governorate and the capital city of Kirkuk. Under Saddam Hussein, a process known as "Arabization" was used to purge the Kurds from the region. Hussein's government paid Arabs to move from southern areas in Iraq to Kirkuk, where they occupied former Kurd homes and jobs. This process, when combined with more deadly atrocities committed by Hussein against the Kurds, significantly decreased the Kurdish population in the province. After the fall of Saddam, Article 140 of the new Iraqi constitution called for a reversal of the Arabization process. Overnight, 20-year-old Arabs were assigned residency to areas in southern Iraq where they had never lived, because their parents were part of the original Arabization before the youngsters were born. Figure 5.1 provides an overview of the At Tameem province.

¹⁰⁰ RTI International, "Local Economic Development: The At Ta'mim Experience," Lessons Learned Brief No. 2 www.rti.org (accessed April 21, 2009).

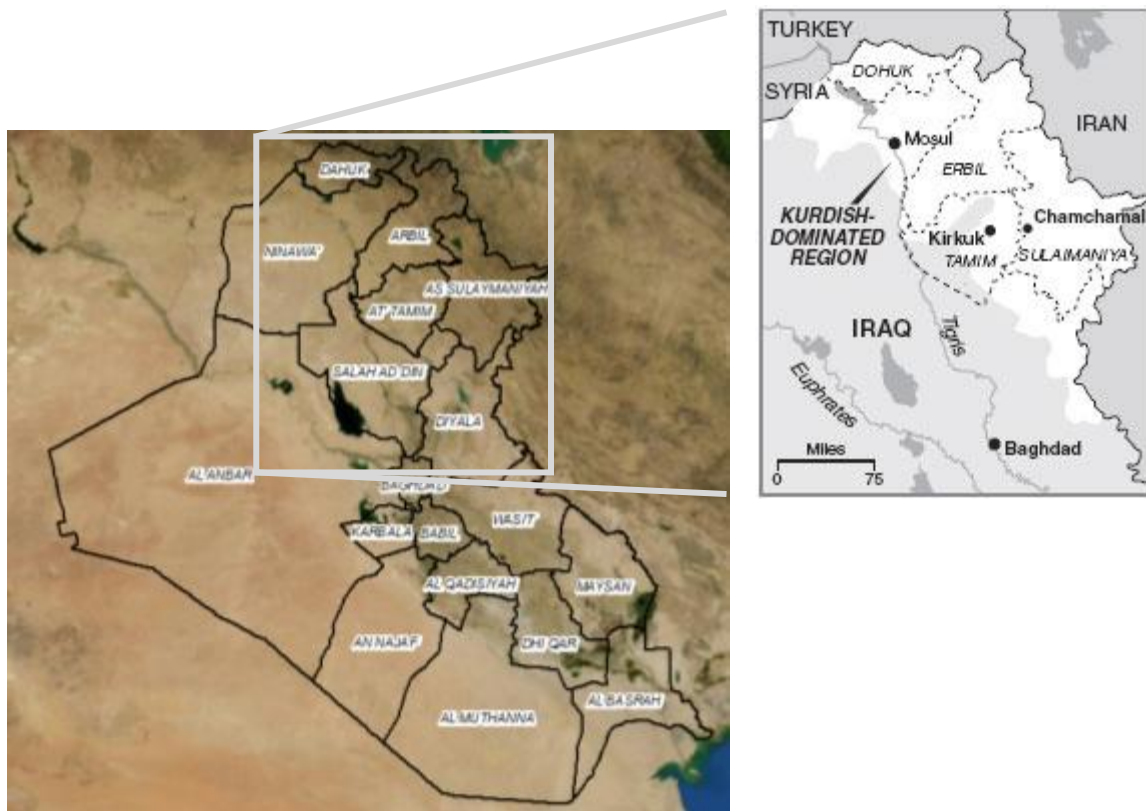


Figure 5.1. Map of Iraq and subset Northern Kurdish Region

This historical context, when compounded with the current high numbers of Internally Displaced Persons (IDPs), high unemployment rates, poor stability and security, and the high economic potential of the Kirkuk oilfields, has created an extremely sensitive environment that could spark at any moment. Violence in the province remains significant and CERP expenditures continue to be made. Thus, the relationship between CERP and insurgency in the At Tameem province is ripe for analysis.

B. PURPOSE AND DESIGN

The null hypothesis of this case is that insurgency is not negatively influenced by CERP reconstruction. The purpose of this case study is to first, look at the localized Kirkuk insurgency and CERP reconstruction expenditures and determine if there is any relationship within. Secondly, this case will test the null hypothesis and examine if the

needs, deserve or message resonance components influence the dependent variable and to what degree. The design for the case is outlined below.

The first section of this case study will outline the data and sources. The characteristics of each dataset will be discussed and elaborated upon. Next, I will provide a background on the sample set. The third section will focus on analysis and establishment of the dependent variable through a general comparative analysis and then through a spatio-temporal analysis. This analysis will provide for the establishment of three variations of the dependent variable with which to compare the independent variables. The fourth and fifth sections are the analysis of the first and second independent variables. Finally, the last section will present the overall findings from comparison among the variables and provide context for the drawing of prescriptive implications.

C. DATA AND SOURCES

Six major datasets were used for this thesis. All the data were first stripped of any classified information and then formatted for the model. The remainder of this section will outline the specifics of each major dataset.

1. DV Datasets

The first dataset is the CERP reconstruction dataset. This data was obtained through the Iraq Reconstruction Management System (IRMS) and spans from February 2004 to October 2009. The characteristics of this data include the location of the project, an explanation of the project, the amount of money spent, and the proposed and actual start and finish dates. Note that there are both reconstruction and non-reconstruction uses of CERP. This thesis uses only those projects that were characterized as reconstruction by the IRMS.

The second major dataset was the violence data. This dataset is based on Significant Action (SIGACT) data derived from the U.S. Army Topographic Engineer Center (now called the U.S. Army Geospatial Center), where they were stripped of any

classified information. This dataset spans from February 4, 2004—September 13, 2009 and includes date-time group (DTG), grid coordinate of incident, and description of incident. There are a few notable weaknesses for the SIGACT data. First, collection on the details of violent acts has improved over time. The SIGACT reports in 2004 and 2005 were not nearly as detailed as they are today. Additionally, reporting on what classifies as a SIGACT has changed through the course of the war and the coding remains inconsistent across areas of operation. Finally, there is an inconsistent recording of the intended target of the attacks. Initially, SIGACT data only included those violent acts that were taken against U.S. forces. More current SIGACT data is typically filtered through regional Joint Coordination Centers (JCCs) where personnel from Iraqi and U.S. forces are present. Thus, the reporting is more substantial and events not involving U.S. forces are more regularly captured.

2. IV1 Datasets

The third major dataset is that used to determine the penetration of “bad guys” (B_{AC}) into a village or neighborhood. This data consists of three separate categories weighted from most important to least important: the current U.S. brigade top 15 High Value Individuals (HVIs), the emerging threats, which consist of those individuals that are not on the HVI list yet, but pose a threat to the stability of the region, and finally the Iraqi Army HVIs.¹⁰¹ All redundancy was removed from this data along with classified information so all that remained was a count of “bad guys” per location.

The fourth major dataset is tips and reporting for the T_{AC} component of IV1. This dataset is a record of the number of tips given to counterinsurgents by Iraqi citizens by location. This dataset also has notable weaknesses. First, it is doubtful that the data are comprehensive given the comparatively low numbers. Second, there is no DTG with the data so it is impossible to determine the period covered. Third, the data do not include HUMAN INTelligence (HUMINT) reports, which are a very valuable and abundant source

¹⁰¹ This data was obtained from 2/1 CAV, the U.S. Army brigade currently responsible for the security of the At Tameem province.

of reporting. Nonetheless, the dataset does show the willingness of a particular village or neighborhood to share information with counterinsurgents.

The fifth dataset is the village assessments. In 2006, I initiated administration of the village assessments in the Kirkuk province through the Iraqi Army. As seen in Appendix A, these assessments capture a status on population size, number of houses, essential services and they also provide a survey of local opinions on the capabilities of the government, criminal justice system and security forces. These assessments were completed by soldiers of the Iraqi Army who were trained in collection methods and in some cases resided in the villages they assessed. The soldiers were trained to assess the essential services themselves and to interview at least three people in each village—one village elder, one village leader—preferably the chosen village leader or *Mukhtar*, and one average villager. For this analysis, the village assessments were first translated from Arabic to English and then coded from a green, amber, red, black status to a numerical status of 1-4, with (1) being the best (green) and (4) being the worst/non-existent (black). This dataset consists of 168 villages or neighborhoods throughout the At Tameem province. The village specific data are quite accurate as the village mukhtars know exactly how many people and houses are under their responsibility and the status of services. However, there is certainly some bias with regard to the perception of the villagers toward the governmental institutions. Although the villagers were interviewed by Iraqis (thereby eliminating some forms of bias), there still exists hesitancy by some to be truly forthcoming with regard to their views—as is the case with most surveys.

3. IV2 Datasets

The final dataset used for IV2 is the media dataset. These data provide the type, name, location and footprint of media outlets in the At Tameem province. The types of available outlets are newspaper, television and radio. There are a total of 35 media outlets throughout the province.

D. SAMPLING

There are a total of 695 villages or neighborhoods in the At Tameem province and the sample assessed is 168 out of the 695 total. All the data could not be ascribed to these 168 villages; thus, I had to determine a distance to which a village would retain attribution. This section will describe how samples were chosen for analysis.

I first looked to the study of the “journey to crime,” to determine how far to assign attribution. Understandably, this process is extremely complicated and context dependent. There has been a concentrated amount of research conducted in the U.S. and the U.K. analyzing the distance criminals travel to conduct their crimes.¹⁰² The distance depends on a number of factors, including: average number of vehicles per household, density of road networks, types of crime, presence of law enforcement, etc. Additionally, actual data is needed both on the crime committed and the distance traveled by the criminal to commit the crime to calculate predictive distances traveled. Such data is not available for Kirkuk at this time. Thus, in determining where to assign attribution with regard to the 168 assessed villages I plausibly set the max distance to five kilometers. In other words, because I did not have access to journey to crime data to calibrate my model, I could not assign responsibility to crimes committed at further distances. Out of the 9018 SIGACTs committed in the At Tameem province since February 2004, 457 of them occurred at distances greater than five kilometers from the villages which were assessed. This accounts for approximately 5%. Figure 5.2 highlights those SIGACTs which were excluded from this research. The black dots represent the assessed villages, the red dots are SIGACTs and the blue dots are those SIGACTs that were excluded. The same five kilometers distance was used for the attribution of all DV and IV1 datasets.

¹⁰² CrimeStat by Ned Levine and Associates and the National Institute of Justice serves as a valuable tool in this regard and the CrimeStat III user manual outlines the history of journey to crime analysis. Available at <http://www.icpsr.umich.edu/CRIMESTAT/>.

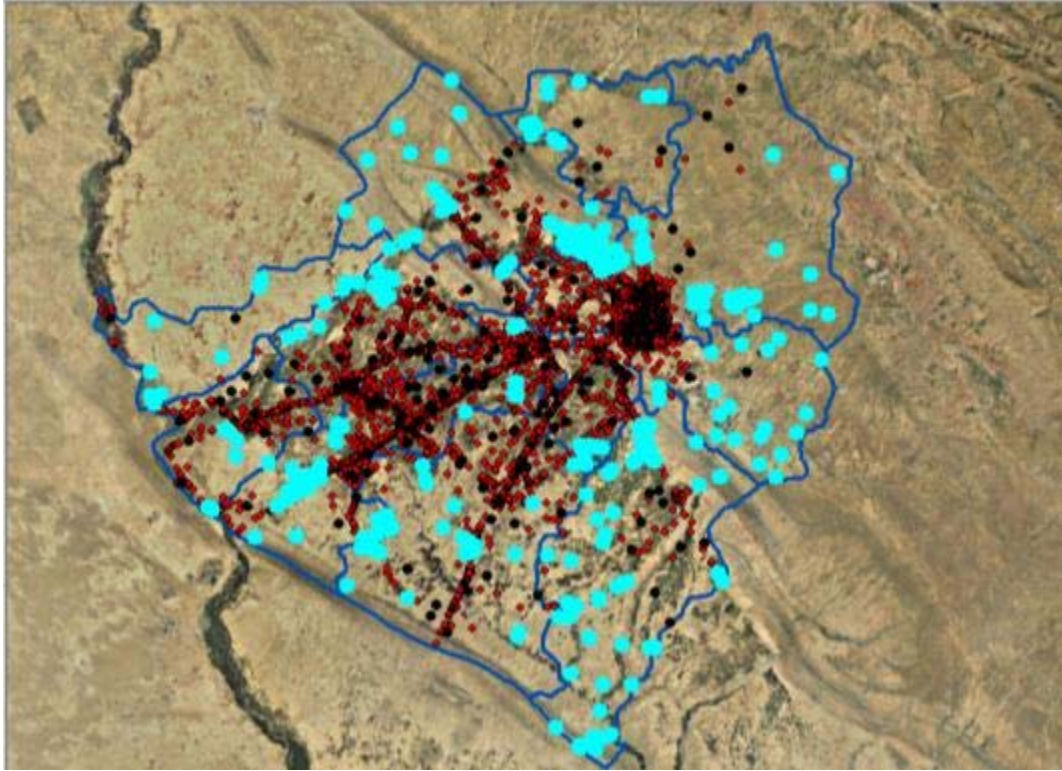


Figure 5.2. SIGACTs Greater than five kilometers from Assessed Villages

E. DEPENDENT VARIABLE ANALYSIS

In the establishment of my dependent variable, I assessed the historical relationship between CERP spending and violence at the village level to identify what constituted successful implementation of CERP in the At Tameem province. I first conducted a basic comparative analysis of CERP spending and violence for all 695 At Tameem villages by attributing CERP money spent and violent acts to the nearest village. Next, I used ArcGIS to assign attribution of the two components based on the five kilometer sampling methodology mentioned previously. Thus, each of the 168 assessed villages were given the attributes of the CERP money spent and violent acts that occurred within five kilometers of the village center. I utilized two approaches to analyze the sampled villages: comparative analysis and spatio-temporal analysis. The remainder of

this section will first give an overview of the comparative statistics between CERP and violence for all 695 villages and then present the comparative and spatio-temporal analysis of the 168 sampled villages.

1. General Analysis of All 695 At Tameem Villages

For the general analysis of all 695 villages, I examined the correlation between CERP money spent and violent acts, the regression of the two components and the descriptive statistics. The remainder of this section will explain the components of each examination and the results.

Correlative analysis for violent acts and CERP money spent by village for all At Tameem villages reveals a value of (+) 0.302. This weak positive relationship shows that at the village level of analysis, the more CERP money that is spent, the more violent acts occur. The regression output depicts the same relationship and the scatter-plot in Figure 5.3 provides a visual representation of the data.¹⁰³

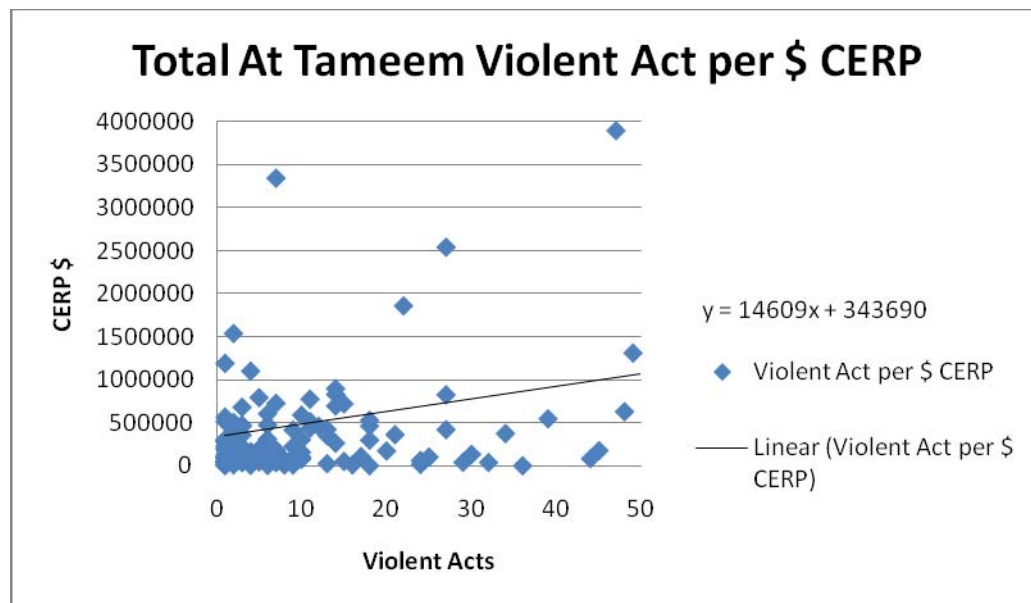


Figure 5.3. Scatter-plot of Violent Acts per CERP \$ Spent in At Tameem

¹⁰³ Full regression output can be seen in Appendix B, Section II—DV Figures.

Out of 695 total villages in At Tameem, 152 were recipients of both violent acts and CERP projects. The sum of violent acts from February 2004 to September 2009 for these 152 villages was 6106 and an average of \$74,102 was spent per village. There were 293 villages where no CERP reconstruction money was spent that accounted for 25.13% of total violence over the same time period. Finally, 91 CERP reconstruction projects were built in 43 villages where there was not a single violent act over the 5 year period. The total spent in these villages amounts to \$15.3 million or 9.77% of total provincial spending.

2. Comparative Analysis of 168 Sampled Villages

For the sampled comparative analysis, I again examined the correlation between CERP reconstruction expenditures and violence, the regression of the two components and the basic descriptive statistics of the two components. The remainder of this section will explain the components of each examination and the results.

For the sampled villages, the correlative analysis reveals a slightly lower value of (+) 0.201. This value does however; still represent a weak positive relationship between the spending of CERP reconstruction money and violent acts. The scatter-plot in Figure 5.4 demonstrates the visual relationship between the components.

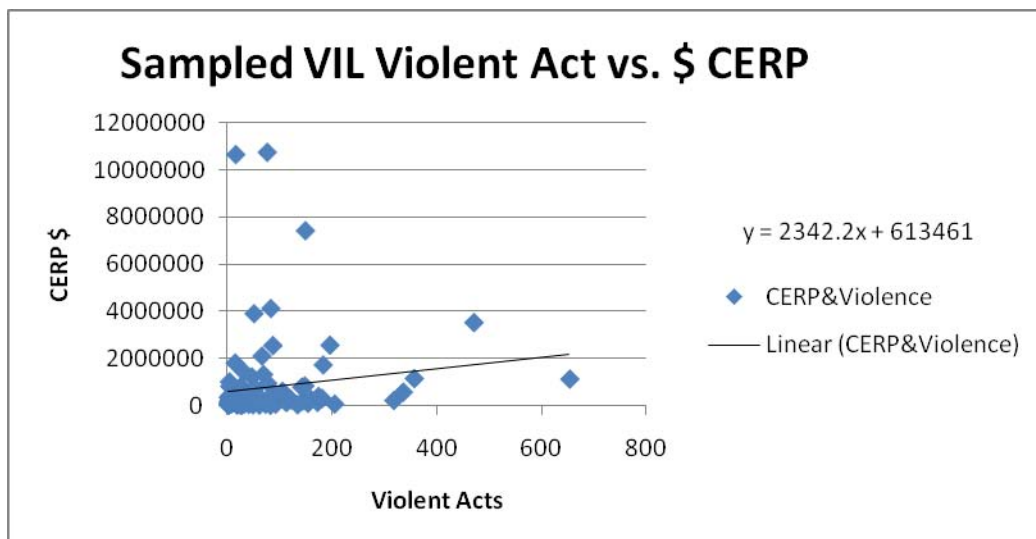


Figure 5.4. Violent Acts per \$ CERP for 168 Sampled Villages

Of the 168 sampled villages, 102 were recipients of both violent acts and CERP reconstruction. The sum of violent acts from February 2004 to September 2009 for these 102 villages was 7456 (out of 9030 for the entire province) and an average of \$784,673 was spent per village. There were 64 villages where no CERP money was spent that accounted for 13.93% of total violence in the sample villages. Finally, only 13 projects amounting to \$1.44 million were built in two villages where no violent acts occurred.

3. Spatio-Temporal Analysis of 168 Assessed Villages

The purpose of the spatio-temporal analysis was to first identify when violent acts occurred in relation to when CERP reconstruction was planned and second to identify where violent acts occurred in relation to where CERP projects were constructed. Figure 5.5 depicts histograms of violent acts and CERP projects by day from February 2004 to September 2009 for the At Tameem province.

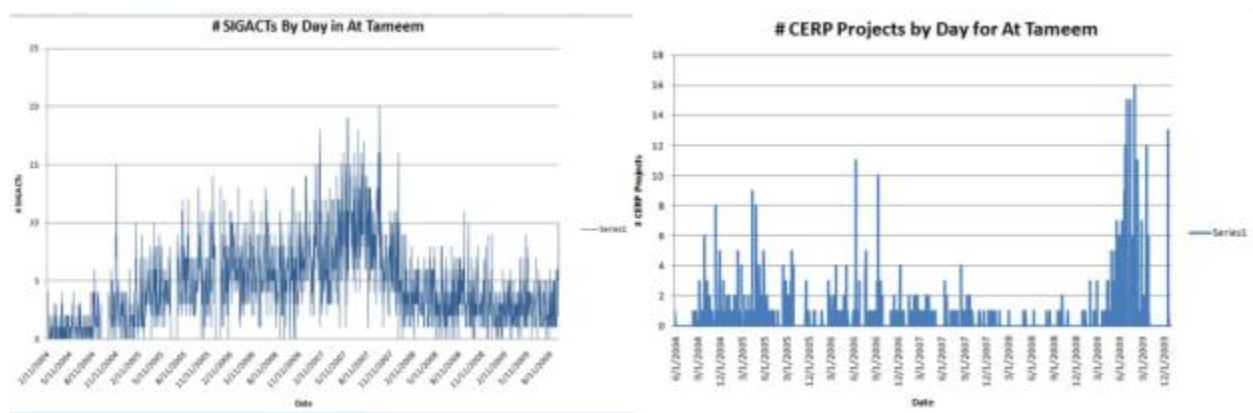


Figure 5.5. # SIGACTs vs. # CERP Reconstruction Projects by Day in At Tameem

As shown in the histograms, there is not much of a temporal relationship between violence and CERP expenditures. The results suggest that historically CERP was not utilized as a tool against violence. CERP projects do not seem to be in response to violence and violence does not appear to be influenced by CERP projects. A spatio-temporal analysis will add a geographic component for analysis.

ArcGIS provides an extremely useful tool for spatio-temporal analysis. With time series data, the program allows you to play events as they occur regardless of event type. This analysis again looked at the occurrence of violence in relation to the planning of CERP projects. The date used for the CERP projects is the forecasted award date, as opposed to the project start or completion date. Figure 5.6 provides an example of the spatio-temporal analysis in ArcGIS and a full set of the screen shots exist in Appendix B, Section XI. The red dots represent violent acts and the green dots represent planned CERP projects.

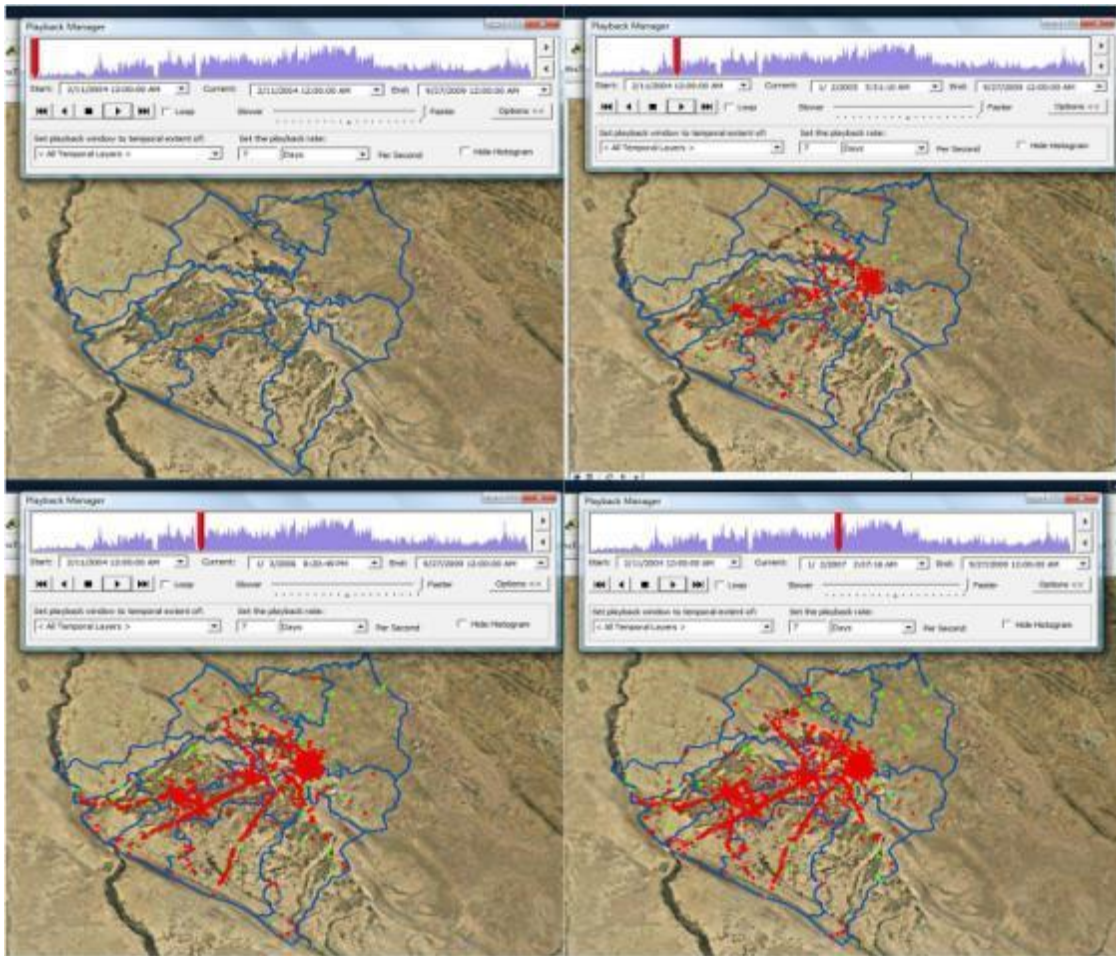


Figure 5.6. Histogram of SIGACTs and CERP projects from 2004 to 2007 in At Tameem

When these events are viewed in a movie format, it is clear that there is little correlation between where violent acts occur and where reconstruction projects are planned. This shows that counterinsurgents were not attempting to leverage popular support in areas where insurgent violence was prevalent through the provision of essential services or other CERP related projects. On the contrary, the data show that CERP projects were predominately planned in those areas where violence was low or non-existent. The spatio-temporal analysis provides a valuable distinction from the basic comparative analysis. According to the comparative analysis, it appears that the violent acts per dollars spent were more proportional. But the comparative analysis represents cumulative data from the entire five year period. From February 2004 to September 2009, CERP expenditures in the At Tameem province were not utilized as a *weapon system* in areas with high insurgent influence. The comparative analysis demonstrates such and the spatio-temporal analysis compounds this fact. There is some proof, however, that the expenditures worked as a weapon system. The next section will try to encapsulate the degree to which the expenditures worked to allow for follow on comparison with the independent variables.

4. Establishment of the DVs: CERP Money to Violence Ratios

In order to determine the contribution of the independent variables toward successful CERP implementation at the village level, a DV figure for comparison must be established to depict the relative success of CERP implementation in each village. Given the analysis above, a CERP to violence ratio was developed and is represented below.

$$DV = \frac{CERP \$}{\left\{ \frac{[Village \text{ Violent Acts}]}{[Village \text{ Population}]} \right\} \left\{ \frac{[Sub - District \text{ Violent Acts}]}{[Sub - District \text{ Population}]} \right\}}$$

DV1 represents the simple ratio between money spent and violence at the village level. DV2 represents the same ratio with locally normalized violence. This DV represents the ratio between CERP money spent and violence, but is locally normalized

by sub-district violence and population size.¹⁰⁴ A higher output in each of these three DVs represents a more successful CERP to violence ratio. In other words, \$10 spent per 10 violent acts is worse than \$10 spent per five violent acts. These ratios represent the success of CERP implementation. We will now establish the IVs and analyze the relationship between the IVs and the DVs.

F. INDEPENDENT VARIABLE ANALYSIS

To determine the degree to which each of the IVs influences the DV, I had to format each of the IVs in through the process mentioned in Chapters III and IV. Next, I input all data into a large village level database for comparison. This section will discuss how the IV data were input into the model and then elaborate on the details of comparison.

1. IV1: Project Characteristics

In congruence with Chapter III, each of the values for all the needs and deserve components were first derived for all 168 villages. The village assessments provided all the values for the needs and the attitude values for the deserve component. The action values for the deserve component were obtained through the assistance of the coalition force brigade currently over watching the At Tameem province. Following the normalization of the values as described in Chapter III, I pulled from the dataset the sample component in the same manner as with the DV. Those events that occurred within five kilometers of a sampled village were assigned to the nearest village and those further than five kilometers from a sampled village were discarded. This section will elaborate on the steps taken to build the needs and deserve components for the model.

Upon the receipt of the village assessments from Iraq, they were translated and coded as mentioned in section C. The perceived weights of importance were then

¹⁰⁴ Two other variations of this DV were developed. The first was simply the ration between money spend and violence and the second was the same ration normalized by localized violence. When the model was run against these DVs, the results were weak likely because they were not appropriately constructed.

multiplied by the assessed status for each village to obtain a final needs value for each village. A screenshot of this database can be seen in Appendix B, Section VI.

Next, I built the deserve model which was significantly more complex. The data were all assigned five kilometer attribution and then imported and normalized as per Chapter III. Appendix B, Section VII provides a screenshot of these variables. The output value from the deserve variable determines where each village falls on the spectrum of popular support.

I assessed three versions of the IV1 model: $N+D$, $N*D$, and $N+D + (N*D)$, where N = Needs and D = Deserve. Upon the analysis of the final output, in which a higher number represented higher priority for a village, it was the $N*D$ relationship that intuitively placed the villages in the order similar to that which I hypothesized. Determination of the utility of this final output value, however, will have to wait until the model can be field tested. The results of IV1 alone were interesting, but IV2 adds a valuable component for analysis.

2. IV2: Message Resonance

Determination of the extent to which the message accompanying a CERP reconstruction project will resonate is clearly context dependent. For this research, I analyzed this phenomenon from the micro, meso and macro levels. These three levels with regard to CERP reconstruction can best be thought of according to the following classification:

Micro—Will they see it?

Meso—Will they talk about it? Maybe they don't see it but their neighbors do.

Macro—Will they hear about it, read about it, or watch it?

The remainder of this section will explain how numerical values for each of these levels of message resonance were determined and how the values were situated in the model.

To determine the extent to which the people of a village will see a project, I used the population densities of each village. As discussed in Chapter IV, much like the spread of infectious disease, the denser a population, the more likely a message is to spread. ArcGIS again was used for this analysis. I first created a population density for each assessed village using standard deviation as the classification and using 1 standard deviation as the interval size. Subsequently, to generate an output value for each village to input into the model, I used the zonal statistics function in the ArcGIS spatial analyst toolbox to create an output value for each village. Through this process I was able to pull the numerical density value for each specific village (or geographical point) in tabular format. Those villages with higher population densities have a higher output value. A graph depicting the output is shown in Figure 5.7.

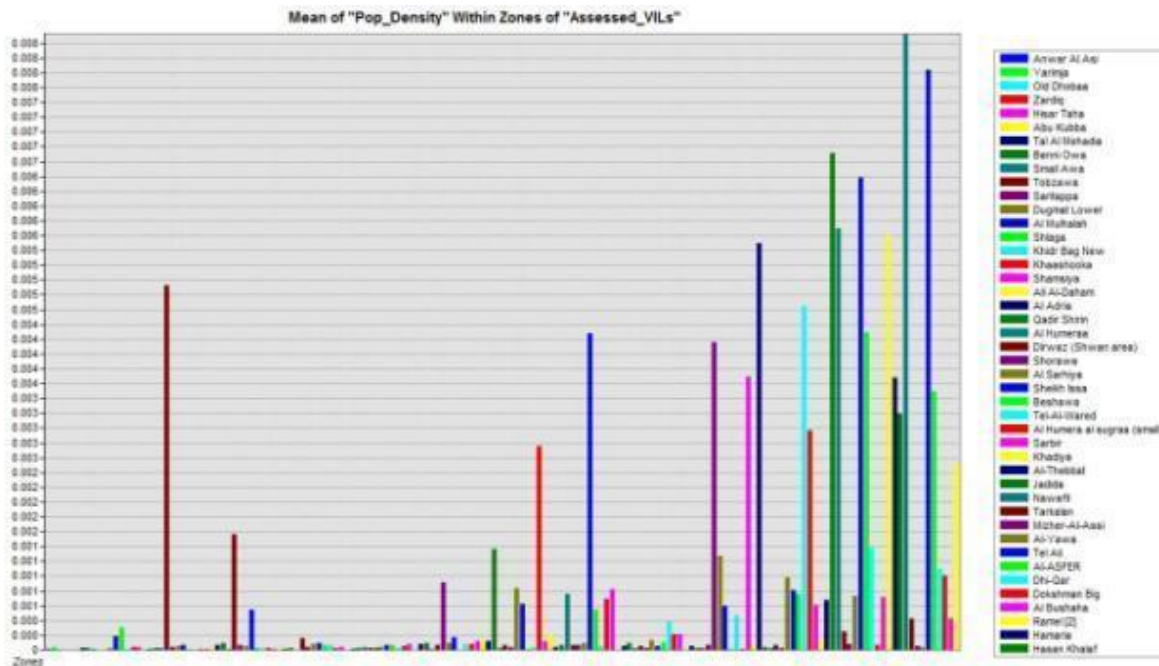


Figure 5.7. Population Density Values by Village

The mean values for each village were then input into the model under the micro level heading. A map of population densities for the province can be seen in Appendix B, Section VIII.

For the meso level analysis, I examined the proximity of each village to every other village to determine the likelihood that residents of one village would talk about CERP reconstruction projects in another village. As per Chapter IV, it is more likely that tightly clustered villages will have a higher exposure to the goings on of a nearby village or adjoining neighborhood than of a distant village. Hawth's tools in ArcGIS was used to determine the density of villages throughout the province. I then used zonal statistics function of the spatial analyst toolbox to determine point values for each of the village densities. The outputs were achieved in the same format as those at the micro level and can be seen in Appendix B, Section IX.

The macro level was slightly more complicated. I obtained a media dataset from the same coalition force unit responsible for the At Tameem province. There are a total of 35 media outlets in the realms of newspaper, television and radio. For the television and radio data, I used ArcGIS to create buffers. The results can be seen in Figure 5.8.

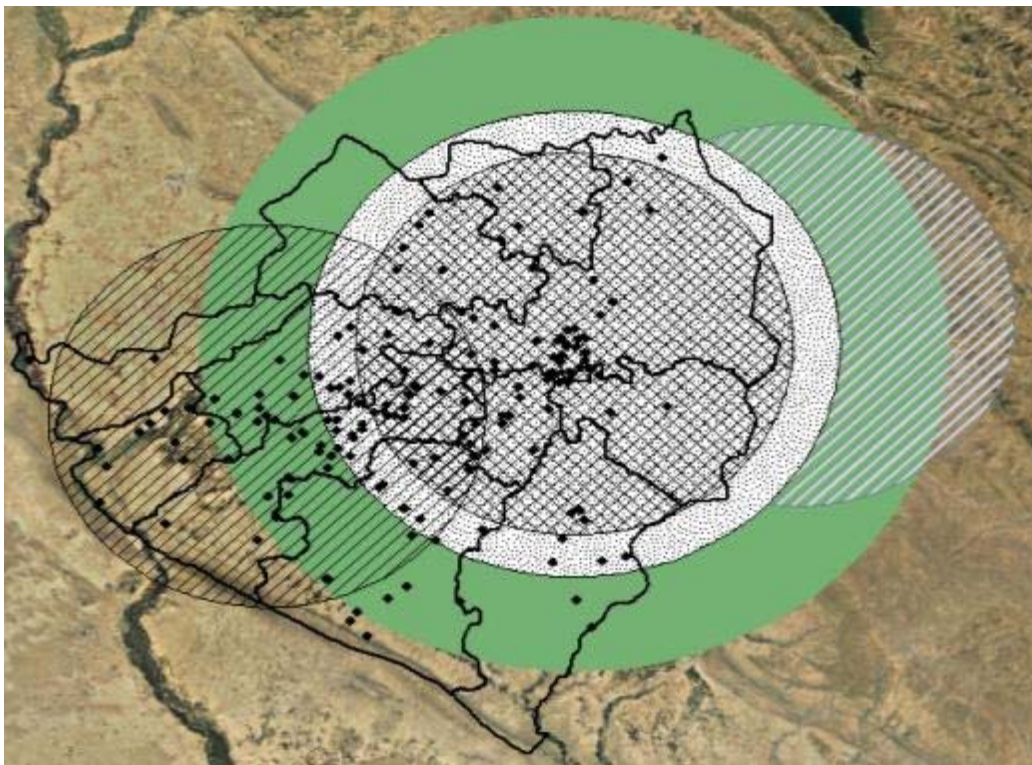


Figure 5.8. Television and Radio Outlets in At Tameem Province

For the various newspapers, I had to use the distribution numbers to determine which villages had access based on population size. Out of the 19 newspapers available in the province, I set allocation to population sizes of 5,000; 10,000 and 15,000 for local, regional and national papers respectively. I determined these numbers based on the footprint and distribution numbers for each newspaper in my dataset.

To assemble the results of the media data, each media outlet was given a value of one. If the media outlet was available to the village, the village received a score of one for that outlet. If not, the village received a zero. A sum score was then derived for each village. Villages with a higher score have greater access to media.

Next, I normalized the outputs from the micro, meso and macro levels in the same manner described in Chapters III and IV. The normalized values were subsequently summed for a final IV2 output. A snapshot of the final output can be seen in Appendix B, Section XI. The next section will present the major findings from the results of the needs, deserve and message resonance values for each village.

G. KEY FINDINGS

Once the output values for needs, deserve, and message resonance were determined, analysis to examine the extent to which each of these variables influenced the dependent variable was conducted using multivariate regression. Analysis of those cases where CERP was most successful revealed a major theme: there is a noticeable pattern in terms of which variables more heavily influence the dependent variable—deserve and message resonance.

While the statistics are not overwhelmingly robust due to the fact that CERP hasn't been implemented in the fashion this model dictates, in those cases where CERP implementation was more successful, the deserve and message resonance variables played a considerably more important role. Comparison between the IVs and DV3, which is normalized by localized violence and population, provides the most considerable revelation—with village needs being notably less important to the influence of violence. The size of the coefficient in relation to the range of the dependent variable demonstrates

that the results are substantively significant. Additionally, the Tstat values for the deserve and message resonance variables show that the results are both substantively significant and somewhat statistically significant.¹⁰⁵ A snapshot of the complete regression output can be found in Appendix C, Section I.

Analysis of the output of the mathematical interaction between these variables reveals a prioritization list that is noticeably weighted more heavily by the deserve and message resonance components. For example, almost every neighborhood in Kirkuk city is at the top of the list. This is consistent with the ability of a message to resonate to a much higher degree in these areas. Additionally, behaviorally these same areas occupy the middle ground—the probability that they can be swayed to support counterinsurgents is higher. A look at the village of Haweeja follows in kind. Haweeja is in the top 10% of the prioritization list and exhibits the same deserve and message resonance characteristics as the Kirkuk neighborhoods. A snapshot of the final model output can be found in Appendix C, Section II.

The patterns revealed through analysis of the At Tameem are of sizeable significance. If CERP truly is to be used as a “weapon system,” these patterns depict those variables that should receive more weight or consideration with regard to CERP money allocation. This is consistent with the fact that many argue reconstruction is of marginal influence at best because reconstruction has been almost exclusively implemented according to the assessed needs of a region alone. These findings prove useful and will substantiate several lucrative implications and future recommendations.

¹⁰⁵ Tstat values were 1.31 and 1.74 for the deserve and message resonance variables, respectively.

VI. IMPLICATIONS AND RECOMMENDATIONS

It is clear that several dynamic factors influence the nature of conflict. Popular support in any type of conflict is always something national and international forces will have to grapple with. In a type of conflict where the enemy is vying for the exact same support base, the environment becomes significantly more complex. The ability to capture and kill threats to national and international norms is an important component for the provision of security, but this component alone rarely if ever prevents further violence—especially when considering a budding insurgency. Security and reconstruction are not independent, rather they are interdependent. This has become a resounding reality in Iraq and Afghanistan. The extent to which reconstruction can be used to influence the security situation is extremely valuable to the optimization of the security environment and money spent on reconstruction. This thesis is an effort to understand how and to what extent reconstruction can influence the security environment.

There were two fundamental purposes of this research. First, to determine if CERP has historically influenced the security environment in any measureable way and second, to develop a model comprised of those components that could plausibly be argued to have an effect on violence and determine which components most significantly influence insurgency. The model was developed in congruence with Social Movement Theory, encompassing those components that would most significantly contribute to the diffusion of contentious collective action.

The framework presented through this model generates a number of testable implications on the relationship between CERP reconstruction and violence. The model was tested using village level data from the At Tameem province in Iraq. The remainder of this chapter will summarize the results and present subsequent implications and recommendations. Section A will summarize the restated findings of the final analysis. Section B will unpack the implications derived from the findings. Section C will present recommendations. Section D will discuss options for further research, and section E will conclude with final remarks.

A. SUMMARY OF KEY FINDINGS

The restated findings of the analysis show that first, historically in the At Tameem province, CERP reconstruction has had no influence (negative influence) on violence. On the contrary, the statistics show that there is a weak positive relationship between CERP money and violence for both the entire province and the sample set. However, spatio-temporal analysis of CERP spending and violence in the At Tameem province, revealed it was not the intention of commanders to spend CERP in an effort to influence violence.

Upon analysis of those variables presented in the prioritization model and their relation to the dependent variable, it became clear that the deserve and message resonance components will most significantly influence violence. Using those cases where CERP was allocated most successfully (i.e., it had the most negative influence on violence), it was derived that the needs of a village are not as important as the deserve and message resonance components in influencing violence.

The mathematical relationships between these variables also produce an output that logically validates these findings. Those villages or neighborhoods that were more deserving and spatially located in areas where the accompanying message could resonate to a higher degree were higher on the prioritization list. The implications that follow were deduced from these findings.

B. IMPLICATIONS

There are several prescriptive implications that can be deduced from this research. This section will proceed from the micro to macro levels with variable implications, security implications, financial implications, implications on the utility of this model in other conflicts, and implications for broader reconstruction funds. Each will yield imperative considerations for final recommendations.

1. Variable Implications

Valuable implications can be derived from each of the three independent variables with regard to how they influenced the dependent variable. They are outlined as follows.

While the needs variable proved less important to the influence of violence, consideration of this variable is still extremely important and its contribution will vary by location. In areas with an overall greater state of need, the contribution of the needs variable could be significantly more profound. Additionally, manipulation of the deserve variable by the addition, subtraction or reinforcement of indicators could reveal greater importance of the needs variable. Finally, in remote areas where the media is as sparse as the people, the needs variable would likely influence violence to a higher degree.

The deserve variable is only as robust as the individual who characterizes it. A commander who is in tune with his environment and takes into account all factors that indicate the willingness of a population to support counterinsurgent efforts will likely achieve more desirable effects. As it was modeled in this research it clearly played a heavy role, but more information could allow it to play a more or possibly less substantial role. Determining where a population's support lies is more of a science than a gut feeling. What people say and what they do are quite often two different things in areas where lives are in danger. For this reason, careful and documented consideration must be given to this variable. At the time of this research, I was unable to find any indication that reconstruction has been implemented with this variable as a contributing factor in project prioritization. This point will be expounded upon in the recommendations section.

Message resonance is a phrase that be characterized by most commanders as "soft" at best. However, this research has shown that is actually more important in influencing violence than satisfying the needs of the people. Like the deserve variable, message resonance accompanying project completion has rarely if ever been a consideration of CERP project planners. It can be deduced that in more remote areas, message resonance may play a much less substantial role. Additionally, knowledge of literacy rates would further contribute to understanding the degree to which newspapers

or other text media outlets would contribute to overall resonance. Regardless of location, people communicate ideas and concerns. The level to which counterinsurgents can tap into the communication network will determine the level to which the ancillary effects of reconstruction projects will resonate and the level to which violence will be influenced.

Each of the independent variables influenced the dependent variable demonstrating that they all play a role in the influence of violence. Modifications of these variables to fit various environmental nuances will likely reveal even more promising results. The degree to which commanders operationalize the variables to take into account all factors involved will determine the level of CERP spending success.

2. Security Implications

The key implication with regard to security, as demonstrated through analysis of the At Tameem province, is that CERP reconstruction can influence violence. Some, such as General Chiarelli, have noticed the ancillary effects of reconstruction efforts, but funds have not been allocated in such a manner that would maximize these ancillary benefits. It is likely that the other provinces in Iraq and Afghanistan embody the same trend with regard to the desire by commanders to use money to influence the security environment.

The model used to determine if the needs, deserve, and message resonance variables influenced violence and to what extent can easily be manipulated to capture the context of other specific areas of operations. The contribution of other potential contributors to the determination of which villages should receive CERP money can be manipulated as a commander sees fit. This predominately applies to the deserve variable. For example, the input for the tips variable (T_{AC}) should be filtered based on the usefulness and validity of information received. Ultimately, the plethora of data available in a classified setting in this regard will present more detailed and refined results.

Knowledge of the operational environment is critical for successful CERP implementation. In the same manner that intelligence sections collect and interpret information on security threats, those responsible for CERP implementation must collect and interpret information that can be used to maximize the effects of CERP expenditures

(part of which is intelligence on security threats). Commanders are likely to be the most in tune with their areas of operations, and should thus be the first line of defense for poor spending. Higher knowledge of the operational environment leads to greater effects. This leads to the importance of the next point.

The deserve component was designed in the model with the ability to weight each factor differently than others. These weights can be adjusted to allow a command team to calibrate the output in a manner that appears plausible. The degree to which counterinsurgents become familiar with their environment will determine the degree to which they can incorporate sensitive factors and subsequently, the degree to which CERP implementation will have the potential to influence violence. Contrarily, lack of such knowledge could actually worsen the security environment. Examples of this are represented in the case study of the At Tameem province. With the complexities involved in insurgencies, counterinsurgents cannot afford the burden of creating even more opposition.

3. Financial Implications

With the ability of security implications to influence life or death, implications with regard to money spent seem somewhat less ostentatious. They are however, important to consider and ring a little louder during difficult economic times. Three general types of CERP spending (besides effective spending) are present currently: poor spending, wasted spending and harmful spending.

Poor spending is resident in those areas where CERP reconstruction minimally contributed to violence. This is likely a result of a commander's poor understanding of the operational environment. It would be understandable to exercise poor spending in the early stages of deployment; however a continual trend in this direction prevents an effective return on any one investment. Spending concentrated on those areas that are predicted to provide substantial returns should receive greater focus.

Wasted spending is that which is wasted on areas where the incentive value is not being used. As mentioned previously, there are numerous funds that can be used for

support maintenance. If CERP truly is to be used as a weapon system, it cannot be wasted on areas where there has not been a single violent act. In the At Tameem province, this research found that \$15.4 million or 10% of total CERP spending in Kirkuk was spent in areas where there has been zero violence. Similarly, 25% of the total violence in the province has occurred in villages that have not received a single dollar of CERP money.

Harmful spending is that which actually contributes to violence. Broad analysis of the entire province shows a weak positive correlation between CERP spending and violence. In early 2007, I participated in a mission to provide basic services to a few refugees that had turned the Kirkuk soccer stadium into a deprived apartment complex. Conditions were the worst of any in the city. We provided assistance to those families we deemed most in need and brought along provincial government officials to participate. The results were incredibly negative. We essentially started a riot and could have caused harm not only to ourselves, but to those to whom we provided aid. Everyone who did not receive these basic services was outraged. Careful consideration must be given to every single expenditure, to ensure that such results are avoided. Spending can actually hurt progress and, with every dollar spent, the ability to influence popular support in the future is lessened.

The final implication with regard to spending is consideration of international and indigenous reconstruction agencies. Poor practices and quality may provide short-term relief but could create long-term problems, even violence. As every project is completed, it obviously has to be turned over to the people and local institutions to maintain. If the project doesn't contribute to the collective greater good, than it is likely a poor project for consideration. Additionally, if the shelf life of the project is more temporary than long term, other agencies are going to have to sink even more money into project maintenance or new construction. Association with campaign plans and overarching goals will likely prevent such occurrences.

4. Implications on the Utility of This Research in Other Conflicts

While the characteristics of the Iraq conflict and those of the At Tameem province in particular, are quite different from the characteristics of other conflicts around the world, it can be deduced that in any type of conflict where popular support is a contributing factor to resolution, application of reconstruction according to this model will yield similar results. As has been alluded to throughout this research, a commander's understanding of the operational environment directly determines the success of implementation. This model can easily accommodate any operational concerns that are unique to a particular area. At the onset of conflict when understanding of the environment is more adolescent, it would likely prove useful to query local allies to determine on which points pressure should be placed. Unfortunately, little can be done if the status and beliefs of people at the village level are not known. This has become apparent in the history of Afghanistan. Rarely has the central government been able to adequately provide for the remote and distant areas of the country. Regional warlords have been empowered primarily because of their localized knowledge and influence.

The model presented in this research can be applied to other conflicts; however, the speed and accuracy of assessing the status and beliefs of people will gauge success. For this reason, the most valuable implication may be that prioritization according to this model should be entrusted to those who know the people best—indigenous institutions. It is difficult for an occupying force to ever understand what makes the people of a different country tick, especially a different country with a different religion and ethnicity. The difficulty in empowering indigenous institutions with the prioritization and spending of large sums of money is trust. Such a scenario presents an opportunity for corruption and unanticipated influence. Therefore, indigenous personnel should only be incorporated to the degree which they can be trusted to spend according to established norms. Lack of consideration of the potential for corruption can lead to degenerative effects and a cycle of mistrust that could push a population's support over to the insurgents.

5. Implications for Broader Reconstruction Funds

This research analyzed the spending of CERP as it contributes to insurgency. However, consideration of dynamics the current conflicts reveals that complete security is an unlikely option before reconstruction efforts must be undertaken. This has become more apparent as the wars in Iraq and Afghanistan have progressed. Security and reconstruction efforts must be undertaken concurrently due to their interdependent relationship. As the planning for higher level projects using other reconstruction funds is carried out, it would be wise for those responsible to consider the impact their reconstruction efforts will have on the security environment and prioritize their projects accordingly. Not that all reconstruction funds are to be used as “weapon systems,” but lack of consideration in this regard would run contrary to the reason these projects are built in the first place—to help people in low-intensity and post-conflict countries return to a state of normalcy.

C. RECOMMENDATIONS

Considering the ability of CERP to influence violence, there are several key recommendations. They concern guidance for CERP use, knowledge of the operational environment, and future considerations for use.

1. Policy for the Use of CERP

The purpose of CERP use needs to be updated, clearly defined, distributed and supported. Written guidance outlining the explicit purpose of the CERP is exactly the same as it was in 2003—it is weak, and consists mostly of a list of what one can and cannot buy. Once the purpose is formally defined, the guidance needs to be distributed to the widest extent possible. There is considerable confusion as to what the purpose of CERP is and what it should be. The openness of the system, which enables commanders to spend as they feel necessary, may actually be too liberal, as many feared. Utilization of CERP should be focused first and foremost on gaining popular support. If the intended purpose is not as a weapon system, the fund should be removed from consideration for

appropriation because, as this research has shown, expenditure does influence violence. Lack of a clear purpose, guidance, and oversight will lead to more than just the inappropriate expenditure of government money—which is where current precautions are focused and what a large portion of the standard operating procedure addresses. Neglect could also cause inappropriate use to contribute to violence.

2. Area of Operations Expertise

As has become apparent throughout this research, the extent to which a commander understands the area of operations will significantly contribute to operational success. This fact is echoed in the literature. The numerous stresses of the combat environment make it difficult for a commander to spend time meeting people and assessing the environment. Further, rewards often focus less on relationships developed than on more tangible, hard results. Command guidance must mandate fluency in the operational environment and this should be the top priority. Assessment of the current situation enables a commander to better conduct all types of operations. Periodic assessments of essential service statuses and popular belief should occur without fail at least a few times during a commander's deployment. The following sub-section outlines the recommendations on the importance and tactics for assessments.

a. Village Assessments

Although many sources, such as the RAND Guidebook for Supporting Economic Development in Stability Operations, elaborate on the need to conduct assessments, they offer little in terms of a format on how to do so.¹⁰⁶ There are many characteristics of an assessment that are necessary to ensure the most accurate deductions can be drawn.

First, the assessment must be completed by personnel who understand the customs and culture of the environment. This may not immediately appear as necessary,

¹⁰⁶ RAND, Guidebook for Supporting Economic Development in Stability Operations (Santa Monica: RAND Corporation, 2009), 59.

but culture is a substantial component of the assessment process. An assessor from a Western international entity will be inherently inclined to assess a status compared to that with which he is accustomed. For example, lack of a visible centralized water system may convince an assessor to record a status as non-existent. However, upon dialogue with the village constituents, or an understanding of decentralized tribal culture, the assessor would realize that constituents have absolutely no shortage of water because of the nearby river where they've harvested their water for the past 1,000 years. With the lack of a basic understanding of the customs and culture, assessors run the risk of recording inaccurate results, which could observably lead to a skewed understanding from which a commander makes a decision.

Second, the assessor should be an individual who is trusted to assess a status objectively. If an international actor is making the assessment, the individual should be someone mature enough to make an unmotivated decision. Careful consideration should be taken when employing an individual from indigenous security forces, as the individual may be inclined to make a decision based on some sort of ethnic, familial or religious affiliation. Precautions must be taken to ensure the assessment is as unbiased as possible.

Third, when engaging the populace, the interviewees should be plural and balanced in stature. The opinions of a regional power broker could be much different than those of a low-income housewife. A balanced approach will result in the identification of the overall average and, therefore, most accurate assessment.

Fourth, the assessment must include the right questions. While statuses on the basic essential Sewer, Water, Electricity, Academics, and Trash (SWEAT) services should be recorded, the opinions of the people on various other topics could be extremely valuable. The questions should be derived from the commander's intent, wherein the results ultimately better enable the commander to make informed decisions with regard to both reconstruction and its influence on the security environment.

Fifth, assessments are living documents. Resources should be dedicated toward continually updating the records. Only with the most accurate and up-to-date information can a commander make a decision that will have an expected impact. Too often, security force personnel fall in on previously completed assessments and consider the task complete. An updated assessment, and its considered relativity to other regional assessments, is critical to a commander's understanding of the area of operations.

Finally, the results of the assessments should be shared and discussed. Dissemination and discussion of the assessments facilitates a common understanding and helps flush out potential shortfalls or requirements for more information. Interagency consideration is important to ensure widespread background and expertise is applied to the problem. It is common for problems addressed by just the security component, for example, to be looked at from an exclusively security perspective. The most effective assessments will have buy in and input from all agencies that could possibly be concerned.

These stated characteristics for a good assessment are not all inclusive; however, they are all necessary and some of the most important for the generation of accurate and reliable results. Deficiency in any category mentioned above will result in the recording of statuses that may not be ground truth depictions and, therefore, derived implications could be ineffective or potentially detrimental to the security environment.

An additional consideration for the conduct of assessments is the employment of the indigenous population. While there is risk of bias inherent in employing indigenous personnel to report on the status of services for the people they know and love, carefully evaluated employment can often engender rewarding and truthful results. Other than the value in actually generating income for the indigenous assessors, the most lucrative benefits come from greater understanding through perspective. As already discussed, cultural perspective is valuable for the achievement of accurate ground truth statuses, but it also pays dividends through the psychological intuition of an indigenous population group. Critical to the understanding of what a

population needs is not just the assessment of what they need, but also an understanding of how a particular people value what they need.

An essential portion of the village assessment is that which is designed to collect opinions on that information a commander determines as necessary for influencing the security environment. It is difficult for a foreign entity to achieve an accurate estimate due to their inherent detachment from the local population. Thus, it is extremely beneficial for the purpose of accurately measuring this variable to employ indigenous personnel in the collection of this data. Locals of the same entity will display less hesitancy in verbalizing their opinions to one of their own, than they will in discussing the situation with a foreigner.

b. Area of Operations Expertise Summary

Collaboration with indigenous forces should be a requirement. While the opinions of indigenous force personnel may not always be trusted, the potential perspective a valuable ally could provide cannot be overlooked. There are smart and knowledgeable indigenous force personnel who can provide invaluable perspective if tapped into.

It is the responsibility of a commander to understand an area of operations, but it is also the responsibility of the larger apparatus to enable a commander to do so. There are several factors that can facilitate a more gradual learning curve. Consideration should be given to deploying units to the same locations on successive deployments, keeping personnel in the same units for longer periods of time, longer deployments and reach back programs. The U.S. Army has given consideration to each of these possibilities and each has clear pros and cons. The recently initiated Afghan Hands program serves as a positive step in this regard. The Afghan Hands personnel will serve in the same area for five years. When not deployed, they will stay current on the daily activities through video telephone conferences and other methods with their forward counterpart. The larger security force has the ability to make steps in this direction as well.

The current conflicts require soldiers to be better diplomats than marksmen. Marketing, interpersonal skills and language skills are vitally important to success—especially at higher levels and for those individuals who engage the local population. Pre-deployment training, however, focuses almost exclusively on shooting, moving and communicating. The complexities of the modern battlefield require more.

3. Data Collection and Maintenance

The ability to assess current operational success is fundamentally dependent on data. The conceptual firestorm that accompanies most deployments often forces commanders to leave data collection and analysis to the intelligence staff. It is nearly impossible to gauge current operational success without the presence of data for comparison. Data should again be collected according to those indicators a commander feels will contribute to higher command guidance goals. Further, data should be shared with incoming units to allow for analysis and understanding of the operational environment. The only data that are shared across the board presently are violence data. Higher emphasis needs to be placed on all those factors that can influence stability.

4. Future Considerations for the CERP Program

As U.S. forces draw down in Iraq and a timetable is placed on Afghanistan, the availability of CERP after participation concludes in these conflicts becomes a concern. While CERP has influenced violence in these conflicts, it is not beyond belief that this tool will be forgotten upon conclusion. Care must be taken to ensure that these funds remain available in all military operations and maintenance (OMA) accounts. Value has been realized and the inability of commanders to draw on the funds should they become quickly engaged in conflict somewhere else could lead to prolonged consequences. Commanders should have access to CERP upon deployment to any low-intensity or post-conflict environment.

Given that the availability of CERP funds should be maintained beyond the completion of the current conflicts, education should also be expounded upon and

continued. Great care should be taken to make certain classes are not fashioned to simply check a block for pre-deployment training. Rather concepts and lessons learned should be presented and tested to guarantee a commander's proficiency in spending large amounts of money to most effectively sway support. As mentioned previously, the degree to which reconstruction can influence violence is a science, not an art.

D. POTENTIAL FOR FURTHER RESEARCH

The next logical step for this research is to field test the model. Implementation of the model into an area of operations after full note of all contributing factors has been taken and implemented, would likely yield supporting results because the model is a reflection of the environment. Such operationalization would generate output that would more directly enable further and more detailed analysis on the contribution of CERP toward the influence of insurgency.

Additionally, similar research conducted in other provinces in Iraq and Afghanistan at the village level would provide a better overall picture of the contribution of CERP to violence. Each province is unique in terms of the methods used to control violence, the level of violence, and the methods guiding the utilization of CERP. The accuracy of these assessments is dependent upon the availability and validity of data, which requires close cooperation with counterinsurgent forces currently operating in the desired regions. It is important that data are collected at the village or neighborhood level to provide the most reliable and pragmatic results.

The wider availability of data and research of additional province will enable the identification of regional trends—which can then be further analyzed for theater wide adjustments and modifications. The relationship between reconstruction and violence is context (regionally) interdependent; however, broad analysis would more appropriately contribute to identification of what the purpose of CERP should be.

E. CONCLUDING REMARKS

Since the beginning of U.S. participation in the conflicts in Afghanistan and Iraq, thousands of Americans, international force and indigenous personnel have been killed. Billions of dollars have been spent on reconstruction and the strength of the U.S. military apparatus has been significantly stressed. Given the reality of the situation, the goal of this research is not so much to determine how the U.S. could have better conducted reconstruction. Rather, it is to provide a useful framework for the drawing of prescriptive implications on how future reconstruction can be used to maximize return on the investment. If this model contributes to the lessening of these realities to even a minimal extent, it will be considered a success. This research shows that, in the At Tameem province, it can.

This research contains a cautionary note for policy makers. The purpose of CERP should immediately be reassessed at the highest levels. If we're going to spend CERP, it should be spent correctly. Otherwise, reconstruction should be left to the experts and CERP should not be spent for reconstruction at all, because it is possible more harm can be created than good. Upon determination of the purpose of CERP, adjustments for allocation should follow in kind.

Finally, for commanders this research provides significant opportunity for localization. The framework can easily accommodate localized data and specification to provide valuable insight on area specific relationships between reconstruction and violence. The results will not fail to engender unique perspective. The realities of the current situation require that these perspectives not be overlooked.

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APPENDIX A.

VILLAGE ASSESSMENT FORM					
AREA		GREEN	AMBER	RED	BLACK
FOOD SUPPLY		GOVERNMENTAL FOOD DISTRIBUTION IS 100% FUNCTIONAL AND RELIABLE	GOVERNMENTAL FOOD DISTRIBUTION IS FUNCTIONAL, BUT NOT ALWAYS RELIABLE	GOVERNMENTAL FOOD DISTRIBUTION SYSTEM EXISTS, BUT IS NOT FUNCTIONING	NO GOVERNMENT FOOD DISTRIBUTION SYSTEM EXISTS
		FOOD IS FRESH AND 100% CONSUMABLE	MOST OF THE FOOD IS FRESH AND CONSUMABLE	SOME OF THE FOOD IS CONSUMABLE, MOST IS SPOILED	FOOD IS COMPLETELY SPOILED AND CANNOT BE CONSUMED
WATER		WATER DISTRIBUTION WORKS IN 100% OF BLDGS	WATER DISTRIBUTION WORKS 50% STRENGTH, SOME LEAKS	WATER DISTRIBUTION DOES NOT WORK	NO WATER DISTRIBUTION LEFT, DESTROYED
		TESTED AS CLEAN OR TOLD BY LOCALS CLEAN	APPEARS CLEAN, NO SMELL	DOES NOT APPEAR CLEAN	CONTAMINATED WATER, SMELLS
HOUSING		100% VILLAGE PEOPLE HAVE SHELTER	GREATER THAN 75% VILLAGE PEOPLE HAVE SHELTER	GREATER THAN 50% VILLAGE PEOPLE HAVE SHELTER	LESS THAN 50% VILLAGE PEOPLE HAVE SHELTER
		RESIDENCES ARE STRUCTURALLY SOUND AND OFFER PROTECTION FROM THE ENVIRONMENT	RESIDENCES ARE DAMAGED, NEED STRUCTURAL EVAL; LIMITED PORTECTION FROM ENVIRONMENT	RESIDENCES ARE DAMAGED; NOT STRUCTURALLY SOUND; SHOULD NOT BE OCCUPIED	RESIDENCES DESTROYED; NOT HABITABLE
POWER		POWER SYSTEM WORKS; BLACK OUTS ARE PLANNED	POWER SYSTEM WORKS; BLACK OUTS UNPLANNED	POWER SYSTEM NOT RELIABLE, BROKEN	POWER SYSTEM DESTROYED
		ELECTRIC LINES ARE UP 100%, NO DAMAGE, NO ENERGY LOSS	ELECTRIC LINES ARE UP AT LEAST 50%, SOME DAMAGE, SOME LINE DETERIORATION, CAN'T DETERMINE POWER LOSS	GREATER THAN 50% OF ELECTRIC LINES DOWN ; MAJORITY OF LINES DETERIORATED; POWER LOSS SEEN	ELECTRIC LINES ARE ALL DOWN, HOT WIRES; POWER LOSS
		POWER GRID STATION INTACT; SECUREABLE	POWER GRID STATION WORKING; NOT SECURABLE	POWER GRID STATION NOT WORKING; NOT SECURABLE; LOOTED	POWER GRID STATION STRIPPED; DESTROYED
PUBLIC SAFETY		POLICE WORKING; BUILDING SECURABLE AND INTACT; EQUIPMENT AVAILABLE AND USEABLE	POLICE WORKING AT LEAST 50%; BLDG SECURABLE BUT DAMAGED; EQUIPMENT AT LEAST 50% AVAILABLE AND USEABLE	POLICE WORKING AT UNDER 50% STRENGTH; BLDG DAMAGED; OVER 50% OF EQUIPMENT NOT USABLE	POLICE ARE NOT USEABLE; BLDG NOT USEABLE; NO USEABLE EQUIPMENT

		FIRE SYSTEM IS IN PLACE, WORKING; BLDG SECURABLE AND INTACT; EQUIPMENT AVAILABLE AND USEABLE	FIRE SYSTEM IS IN PLACE; BLDG SECURABLE BUT DAMAGED; EQUIPMENT AT LEAST 50% AVAILABLE AND USEABLE	FIRE SYSTEM IS NOT ORGANIZED, NOT FORMAL; NO SET BLDG; LESS THAN 50% EQUIPMENT AVAILABLE	NO FIRE SYSTEM BUILT; NO BLDG; NO EQUIPMENT
		CRIME IN AREA IS NOT ISSUE; JAIL EXISTS, CLEAN AND USEABLE; LOCALS LISTEN AND OBEY AUTHORITY	CRIME OCCURS; POLICE ARE PROACTIVE; JAIL IS USEABLE; MAJORITY OF LOCALS OBEY AUTHORITY	CRIME OCCURS; POLICE ARE REACTIVE; JAIL IS SUBSTANDARD; LOCALS DISGRUNTLED	CRIME GREAT PROBLEM; NO JAIL; LOCALS DO NOT FOLLOW AUTHORITY
		MAJOR ROUTES INTO AREA ARE 100% PASSABLE; NO PIRATING OR CORRUPTION	MAJOR ROUTES ARE USUALLY PASSABLE; OCCASIONAL PIRATING OR CORRUPTION	MAJOR ROUTES ARE SOMETIMES PASSABLE; PIRATING AND CORRUPTION EXIST	MAJOR ROUTES INTO AREA ARE NOT PASSABLE; PIRATING AND CORRUPTION PREVALENT
		UXO'S/IED'S ARE NOT AN ISSUE; AREA SWEEP	UXO'S/IED'S HAVE BEEN FOUND, MARKED AND REMOVED; NO CONTINUOUS THREAT	UXO'S/IED'S CAN STILL BE FOUND; CONTINUOUS SWEEPS REQUIRED; THREAT	UXO'S/IED'S ARE A CONTINUOUS OCCURANCE; EFFECT DAILY LIFE AND OPERATIONS
	HEALTH SERVICES	MEDICAL BUILDING INTACT; HAS BACK UP GENERATOR; NO SUPPORT ISSUES	MEDICAL BUILDING USEABLE; NO BACK UP GENERATOR; MINIMAL BASIC SUPPORT ITEMS	MEDICAL BUILDING HEALTH ISSUE; UTILITES NOT RELIABLE; SUPPORT ITEMS MISSING	MEDICAL BUILDING NOT USEABLE FROM DAMAGE OR DISREPAIR; NO WORKING UTILITIES; LOOTED
		EMERGENCY SERVICE RUNNING AND EFFICIENT; MORE THAN ONE VEHICLE; DESIGNATED PERSONNEL	EMERGENCY SERVICE EXISTS; ONE VEHICLE; PERSONNEL MAN THE TRUCK MAY OR MAY NOT BE TRAINED	EMERGENCY SERVICE IS NOT IN PLACE; VEHICLE EXISTS; NO TRAINED PERSONNEL	NO EMERGENCY SERVICE; NO VEHICLE; NO PERSONNEL
		MEDICAL BUILDING IS SUFFICIENTLY STAFFED WITH 100% TRAINED PERSONNEL	MEDICAL BUILDING IS STAFFED WITH OVER 50% TRAINED PERSONNEL	MEDICAL BUILDING IS STAFFED WITH LESS THAN 50% TRAINED PERSONNEL	MEDICAL BUILDING IS UNDERMANNED AND UNDERTRAINED
	TRASH	TRASH COLLECTION SYSTEM EXISTS; RELIABLE	TRASH COLLECTION EXISTS BUT NOT RELIABLE	TRASH COLLECTION DONE INFORMALLY; NO SYSTEM	NO TRASH COLLECTION; TRASH STAYS
		TRASH PUT IN AN AREA THAT IS NOT A HEALTH ISSUE	NOT KNOWN WHERE TRASH IS DUMPED	TRASH IS CONSOLIDATED IN A PLACE THAT COULD BE A HEALTH ISSUE	TRASH IS CONSOLIDATED IN A PLACE THAT IS A HEALTH ISSUE
		PUBLIC FACILITIES DO NOT HAVE A TRASH PROBLEM	PUBLIC FACILITIES DO HAVE TRASH; BUT REMOVAL IS UNRELIABLE	PUBLIC FACILITIES HAVE TO REMOVE THEIR OWN TRASH	PUBLIC FACILITIES HAVE TRASH; NOT REMOVED
	SEWER	SEWAGE SYSTEM WORKS, CONSISTENT	SEWAGE SYSTEM RUNS BUT CAN'T DETERMINE WHERE/IF TREATED	NO TREATMENT SEEN-SOMETHING EXISTS BUT BROKEN	NO SEWAGE SYSTEM LEFT, DESTROYED

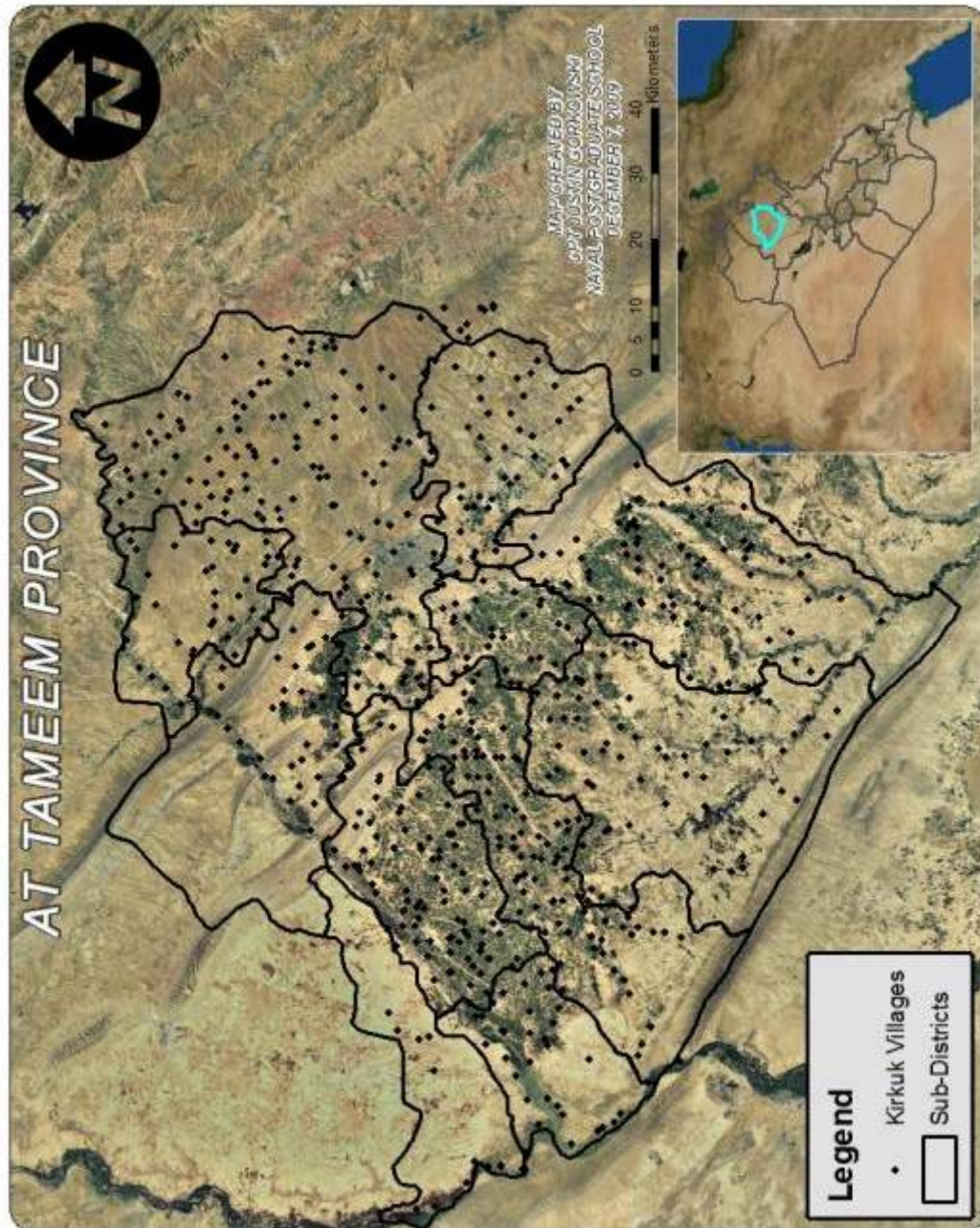
		NO SEWAGE SEEN, OR SMELT	NO SWEAGE SEEN, CAN BE SMELT- SYSTEM BROKEN	SWEAGE SEEN AND SMELT-SYSTEM BROKEN	RAW SEWAGE AND SMELL WOULD BE A HEALTH ISSUE
		PUBLIC FACILITIES WORK IN 100% OF BLDGS	PUBLIC FACILITIES WORK IN AT LEAST 50% OF BLDGS	PUBLIC FACILITIES EXIST, WORK IN LESS THAN 50% OF BLDGS	PUBLIC FACILITIES DO NOT EXIST, NO WORKING SEWER
	ROADS	MINIMUM OF PAVED ROAD; CAN BE UPGRADED, NO DAMAGE OR POTHOLES	ROAD PAVED OR UNPAVED; POTHOLES OR DAMAGE THAT WILL EFFECT FLOW OF TRAFFIC	SEVERLY DAMAGED; UPGRADE TO SUPPORT IS EXTENSIVE; MATERIAL NOT READILY AVAILABLE	ROAD IS NOT TRAFFICABLE
	BRIDGES	BRIDGE IS TRAFFICABLE; NO VISIBLE DAMAGE	BRIDGE IS TRAFFICABLE; DAMAGE TO SPANS, NOT SUPPORTS	BRIDGE IS NOT TRAFFICABLE; DAMAGE TO BOTH SPANS AND SUPPORTS	BRIDGE IS NOT PASSABLE
	SCHOOLS	BUILDING IS USEABLE; SECURABLE; UTILITIES WORK	BUILDING USEABLE; NOT SECURABLE; UTILITIES WORK AT OVER 50%	BUILDING USEABLE; NOT SECURABLE; UTILITIES WORK AT UNDER 50%	BUILDING NOT USEABLE; UTILITES DON'T WORK
		EQUIPMENT IN BUILDING ENOUGH FOR ALL STUDENTS	EQUIPMENT IN BUILDING ENOUGH FOR OVER 50% OF STUDENTS	EQUIPMENT IN BUILDING ENOUGH FOR LESS THAN 50% OF STUDENTS	NO EQUIPMENT TO SUPPORT STUDENTS
		100% OF STUDENTS HAVE ADEQUATE SCHOOL SUPPLIES	MORE THAN 50% OF STUDENTS HAVE ADEQUATE SCHOOL SUPPLIES	LESS THAN 50% OF STUDENTS HAVE ADEQUATE SCHOOL SUPPLIES	NO STUDENTS HAVE SCHOOL SUPPLIES
	COMMUNICATION	LAND LINE TELEPHONE WORKS, EQUIPMENT IS AVAILABLE, RELIABLE IN ALL PUBLIC FACILITIES	LAND LINE HOOKUPS ARE IN PUBLIC FACILITIES; EQUIPMENT IS OVER 50%; FAIRLY RELIABLE	LAND LINE HOOKUPS ARE IN FACILITIES; EQUIPMENT IS IN LESS THAN 50%; NOT RELIABLE	NO LAND LINE HOOKUPS IN FACILITIES; SYSTEM DOES NOT WORK
		ALL THREE FORMS OF MEDIA: RADIO, TV, NEWSPAPER EXIST AND ARE RUNNING	ONE FORM OF MEDIA EXISTS AND IS RUNNING	ONE FORM OF MEDIA EXISTS BUT IS NOT RUNNING	NO FORMS OF MEDIA EXIST
	ATTITUDES	COMMUNITY LEADERS NOT HOSTILE; RELIGIOUS CENTERS ARE INTACT; SUPPORT IA/CF FIXING	COMMUNITY LEADERS ARE NEUTRAL; RELIGIOUS CENTERS ARE DAMAGED BUT SECURABLE; SUPPORT IA/CF FIXING	COMMUNITY LEADERS ARE NEGATIVE; RELIGIOUS CENTERS ARE DAMAGED, NOT SECURABLE; SKEPTIC OF IA/CF SUPPORT	COMMUNITY LEADERS HOSTILE; RELIGIOUS CENTERS DESTROYED; DON'T TRUST IA/CF AND DON'T WANT HELP
		NO ETHNIC TENSION, ALL ONE COMMUNITY	DISTINCT ETHNIC GROUPS WITHIN AO; WILL SUPPORT IF IS EQUAL TO ALL	DISTINCT ETHNIC GROUPS WITHIN AO; ONE GROUP IS DOMINANT; IMPROVING AREA	ETHNIC VIOLENCE OCCURS; ONE GROUP RULES; TO IMPROVE AREA WOULD INCREASE ETHNIC

			GROUPS	CAN NOT BE EQUAL TO ALL GROUPS	TENSION
		EMPLOYMENT IS OVER 50%	EMPLOYMENT IS UNDER 50%; ABLE TO WORK	EMPLOYMENT IS UNDER 50%; UNABLE TO WORK	EMPLOYMENT IS AN ISSUE; WON'T WORK
		NO FORMAL PARAMILITARY THREAT	PARAMILITARY THREAT BRIEFED AT BDE LEVEL	PARAMILITARY THREAT BRIEFED AND CONCERNED AT BDE LEVEL	PARAMILITARY THREAT BRIEFED AND CONCERN AT DIV LEVEL
		ENTIRE POPULATION SUPPORTS THE ESTABLISHED GOVERNMENT OF IRAQ (LOCAL, PROVINCIAL AND NATIONAL)	MAJORITY OF THE POPULATION SUPPORTS THE ESTABLISHED GOVERNMENT OF IRAQ (LOCAL, PROVINCIAL AND/OR NATIONAL)	MAJORITY OF THE POPULATION DOES NOT SUPPORT THE ESTABLISHED GOVERNMENT OF IRAQ (LOCAL, PROVINCIAL AND/OR NATIONAL)	ENTIRE POPULATION DOES NOT SUPPORT THE ESTABLISHED GOVERNMENT OF IRAQ (LOCAL, PROVINCIAL AND/OR NATIONAL)
		ENTIRE POPULATION SUPPORTS THE IRAQI ARMY	MAJORITY OF THE POPULATION SUPPORTS THE IRAQI ARMY	MAJORITY OF THE POPULATION DOES NOT SUPPORT THE IRAQI ARMY	ENTIRE POPULATION DOES NOT SUPPORT THE IRAQI ARMY
		ENTIRE POPULATION SUPPORTS THE IRAQI POLICE	MAJORITY OF THE POPULATION SUPPORTS THE IRAQI POLICE	MAJORITY OF THE POPULATION DOES NOT SUPPORT THE IRAQI POLICE	ENTIRE POPULATION DOES NOT SUPPORT THE IRAQI POLICE
VILLAGE/NEIGHBORHOOD SPECS	VILLAGE SPECIFICS	NAME OF VILLAGE:			
		# HOUSES:		PRINTED NAME AND DATE OF ASSESSOR:	
		# PEOPLE:			
		RELIGIOUS %: (% SUNNI/SHIA, ETC)			
		ETHNICITY %: (% ARAB/ KURD/ TURK, ETC)		SIGNATURE OF ASSESSOR:	
		OCCUPATION %: (% FARMERS/ IA/ BANKERS, ETC)			
		IMPORTANT PEOPLE AND LOCATION OF HOUSE (GRID):			
		# SCHOOLS:			
		# CLINICS:			
		#/NAME OF GOV'T BLDGS:			
		HISTORIC/PROTECTED PLACES AND GRID:			

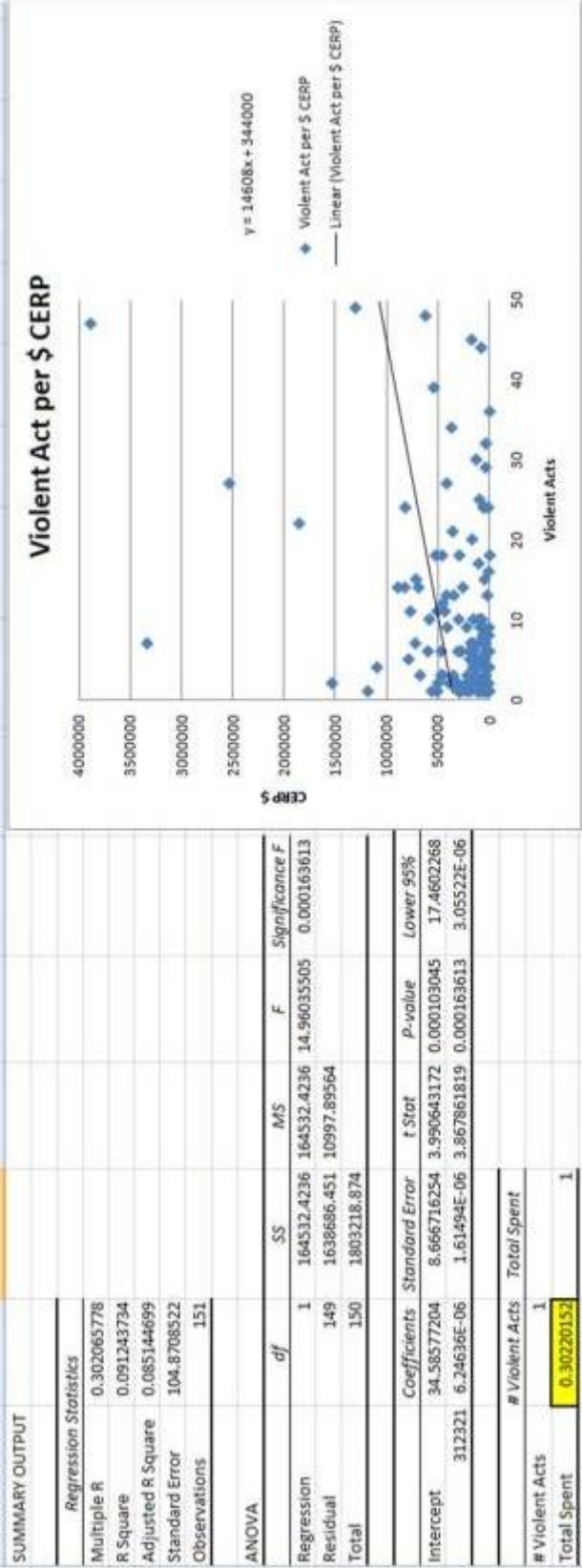
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APPENDIX B: DV/TV DIAGRAMS

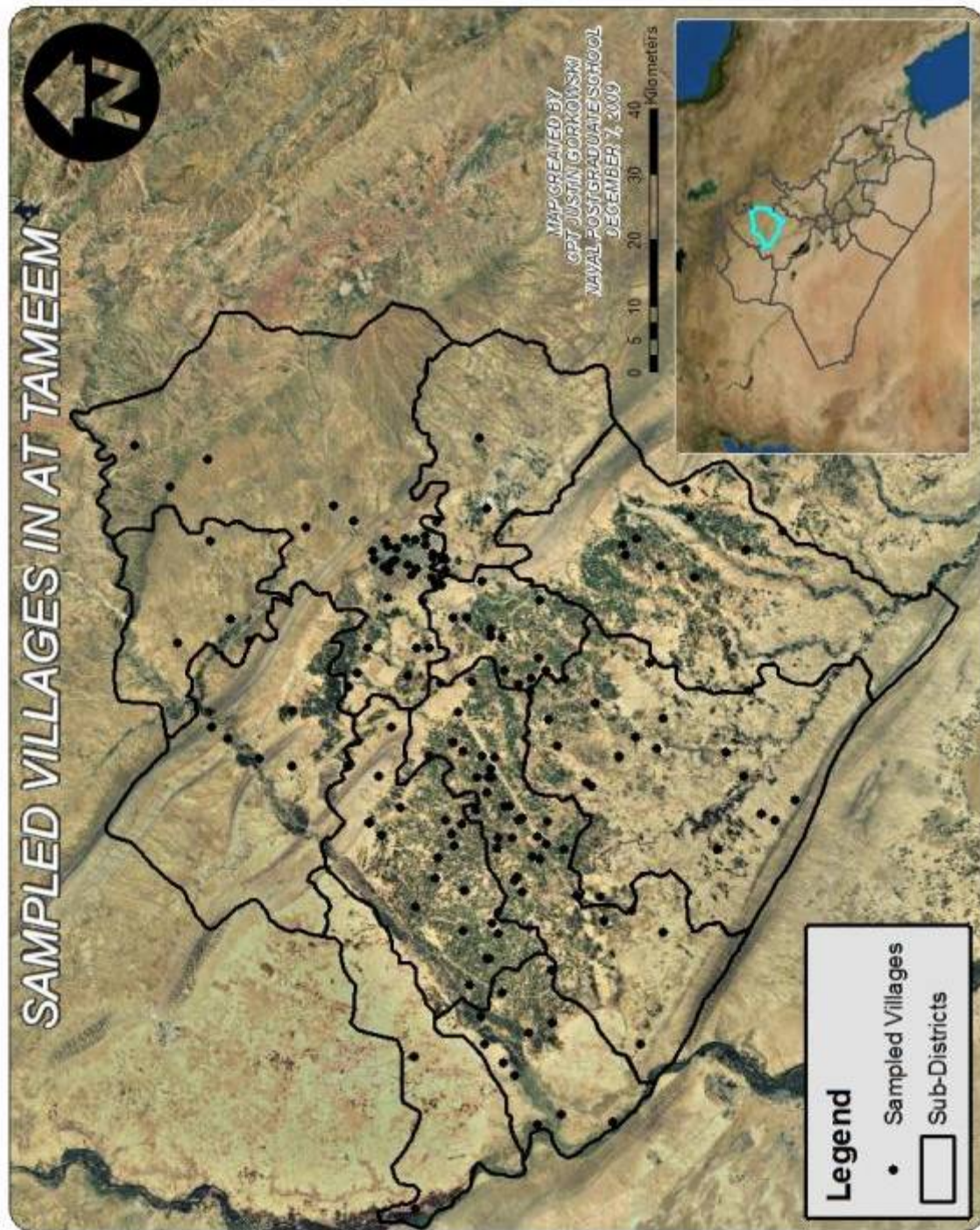
I. PROVINCIAL MAP



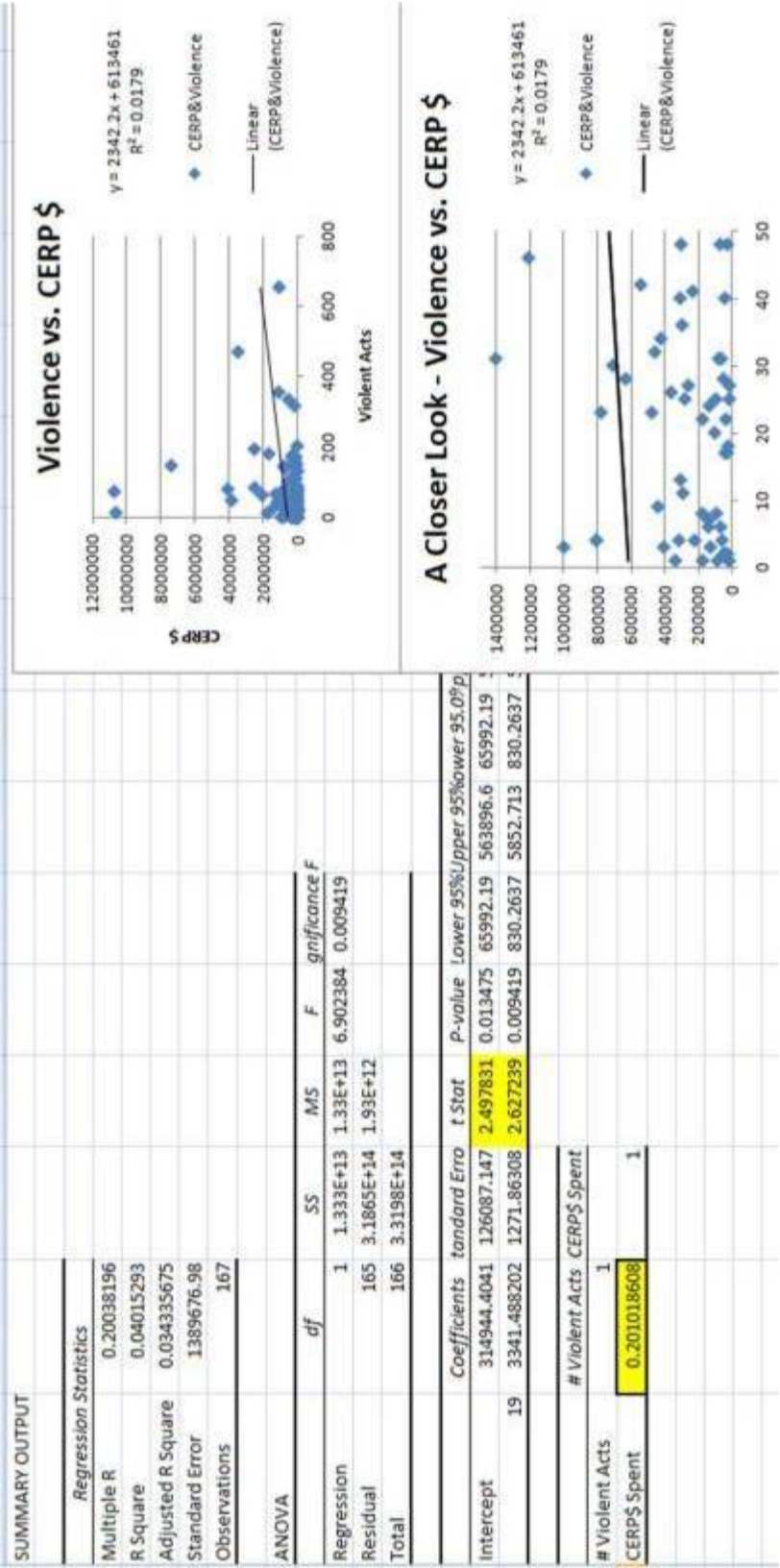
II. DV REGRESSION WITH CORRELATION



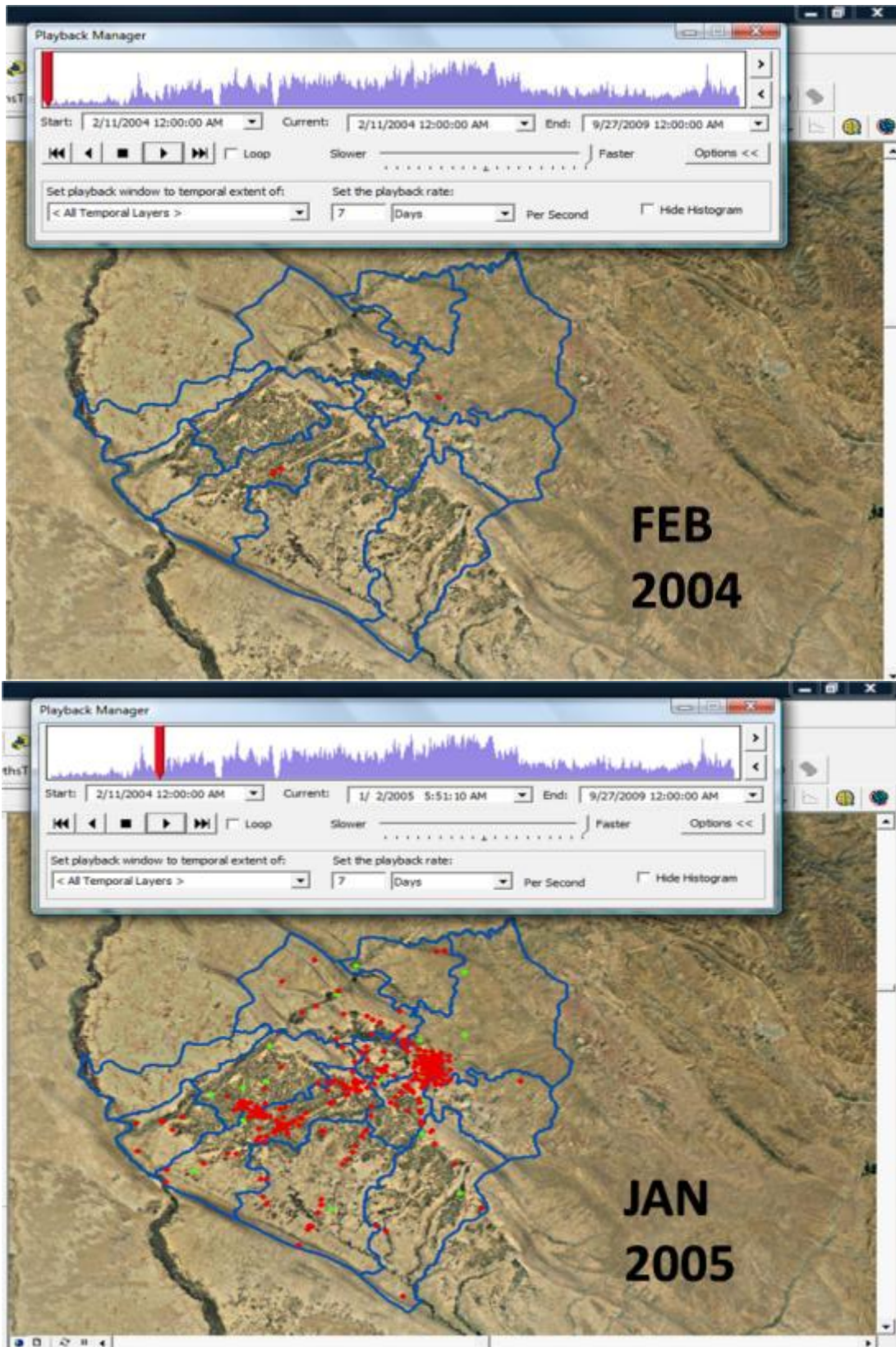
III. SAMPLED VILLAGES

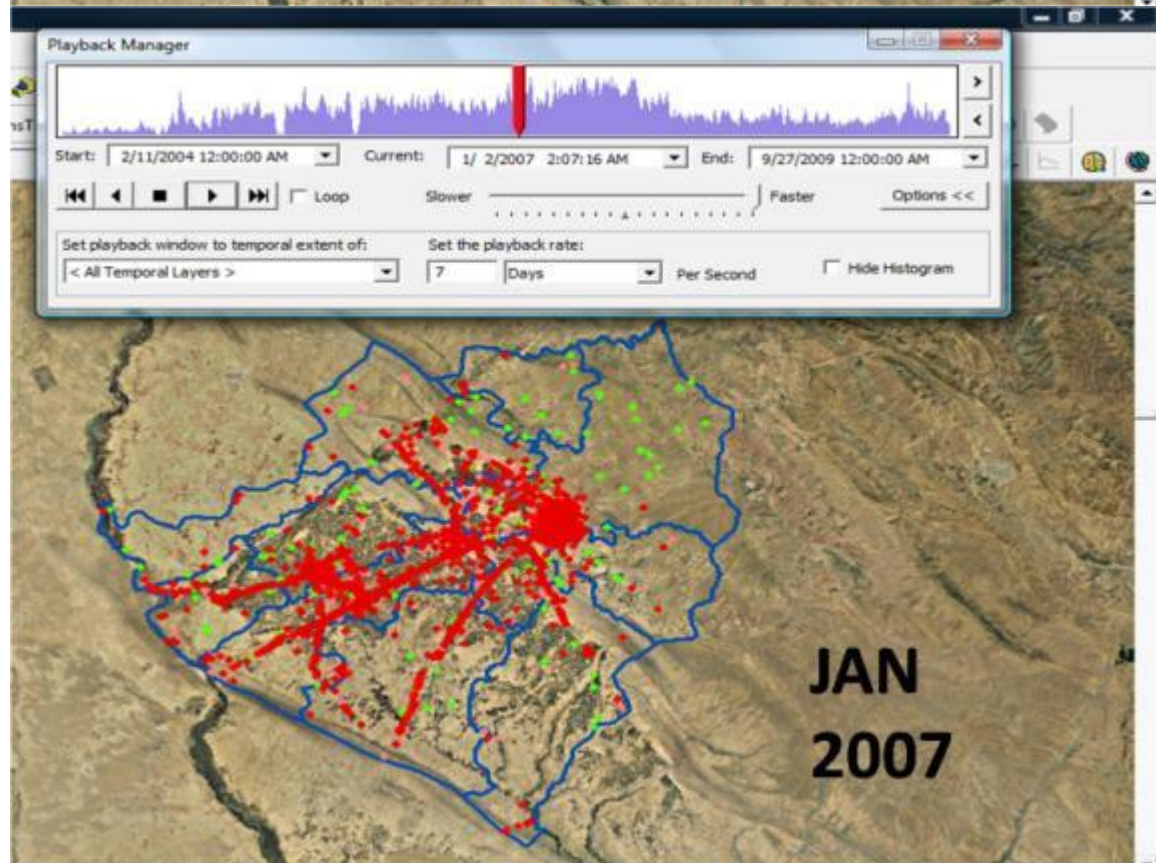
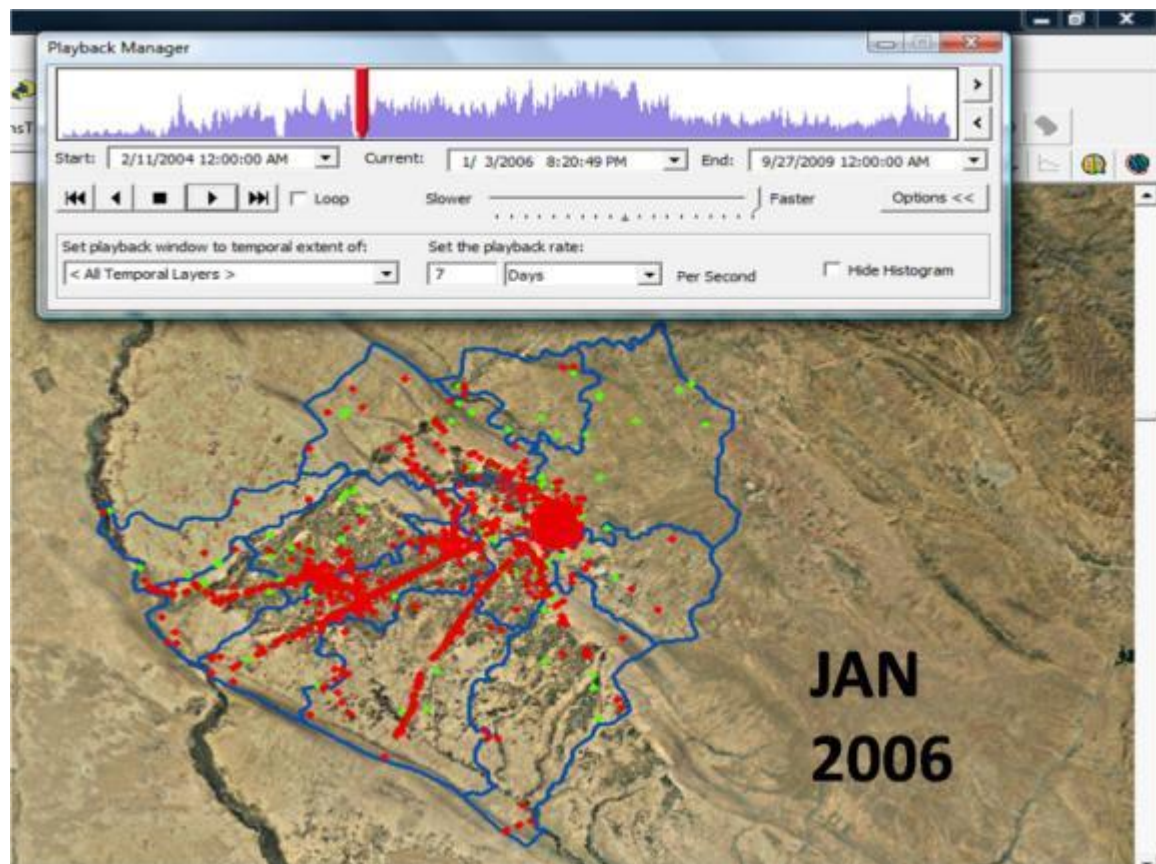


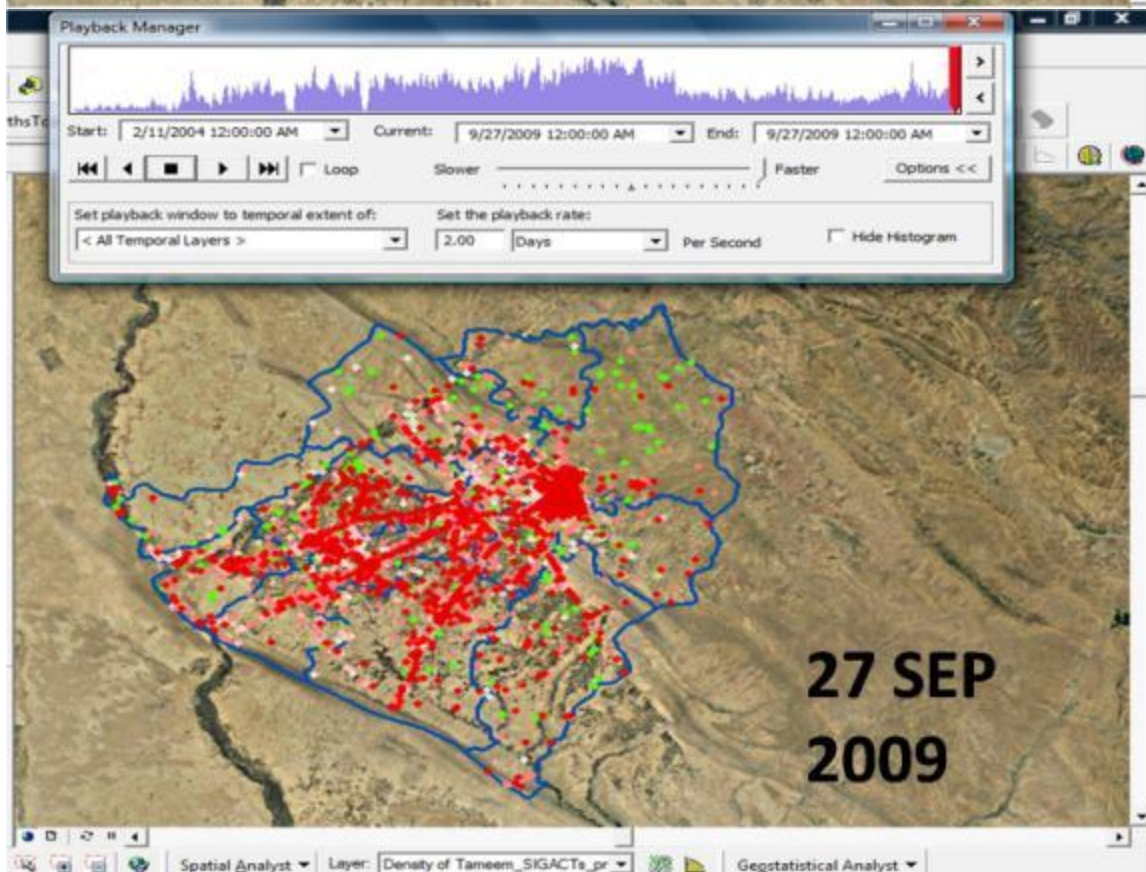
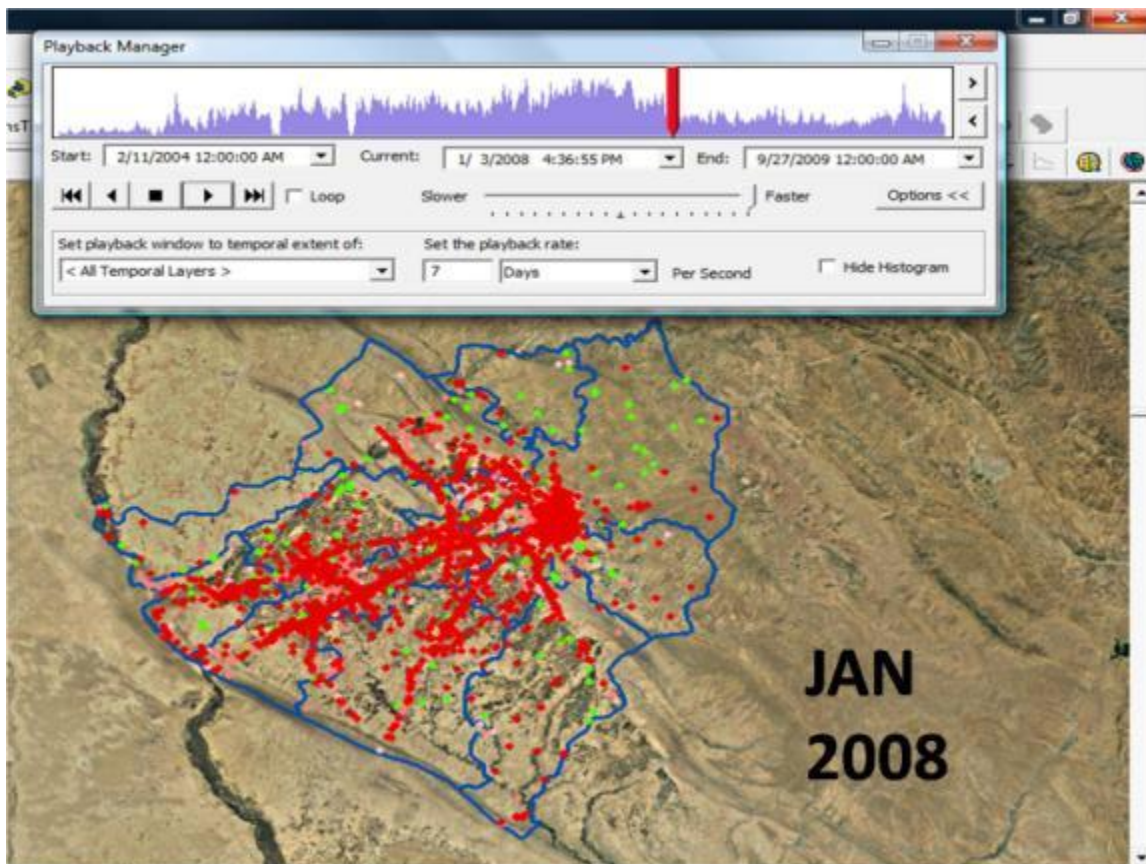
IV. SAMPLE SET REGRESSION AND CORRELATION



V. SPATIO-TEMPORAL SCREENSHOTS







VI. NEEDS DATABASE

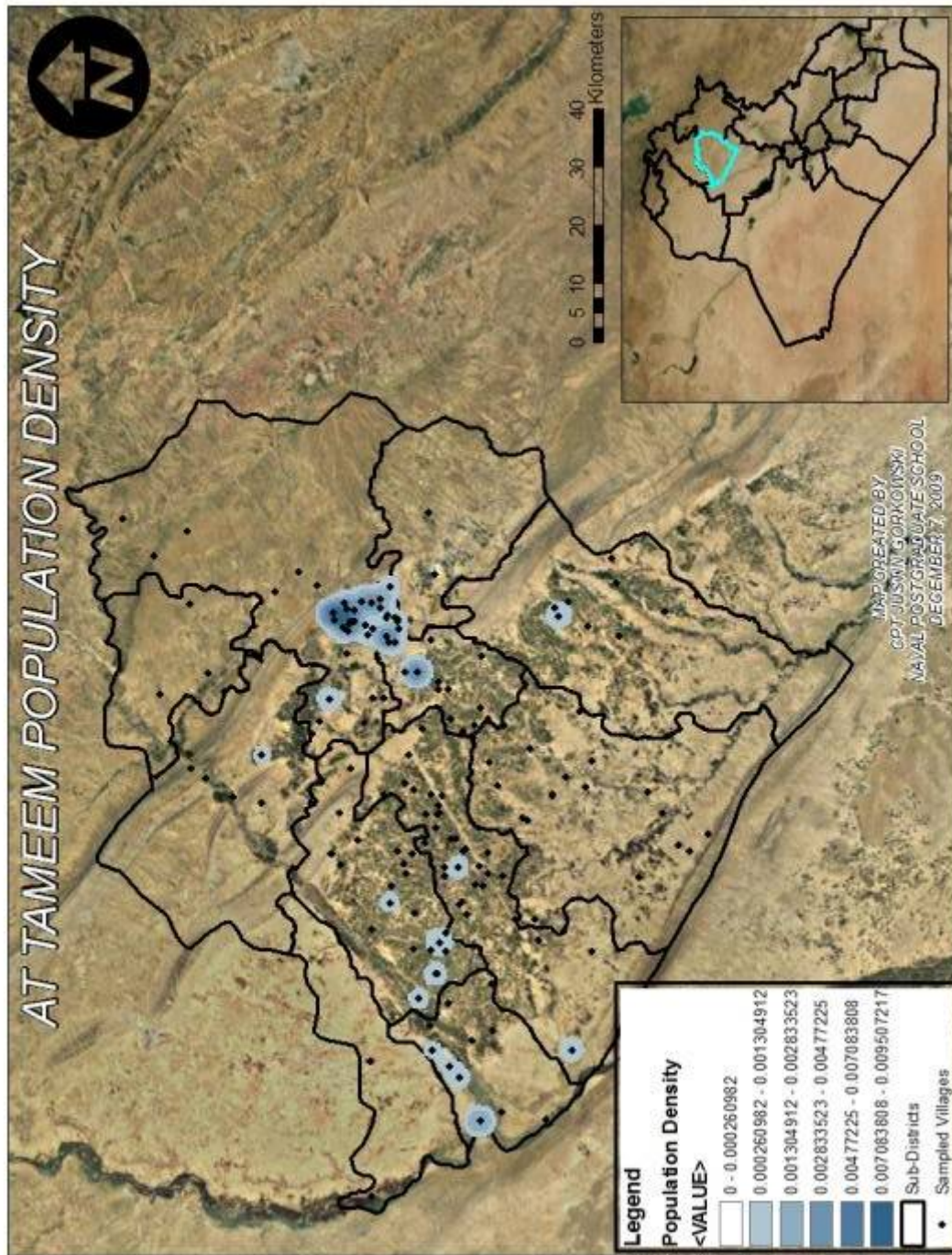
Kirkuk Village Assessment Database														
		WEIGHT:												
		From Muktar's		Food Supply			Water		Housing		Electricity			
Hard Copy #	Village Name	Total Score	Population Size	# Houses	Food Distribution	Food Quality	H2O Distribution	H2O Quality	Presence of Shelter	Shelter Quality	Power System Capacity	Electric Line Status	Power Station Status	Police Capability
116	Abdulla Al-Yassin	189	800	140	1	2	4	3	3	3	3	2	2	3
80	Abdullah	187	1000	200	2	2	2	2	2	2	2	2	2	2
36	Abu Kubba	261	175	65	3	3	3	3	3	3	4	4	4	4
	Abu-Al-Jaise	182	450	50	1	1	3	3	2	2	1	3	2	3
29	Addriss Sultan	158	300	50	1	2	1	1	1	3	1	1	1	4
88	Aisalana	213	1200	100	3	4	2	3	2	3	3	3	2	2
	204 Al Adria	233	90	13	2	2	3	3	3	3	3	3	3	4
	81 Al Ahnaf	203	500	60	1	2	1	2	1	2	3	2	2	4
169	Al Ammar	130	190	22	1	1	1	1	1	1	1	4	1	2
180	Al Ammara	213	153	13	4	4	3	3	1	1	2	2	2	4
37	Al Asraa Wa Almufqden (Kirkuk t	187	3350	1300	2	2	2	3	1	3	2	2	2	3
58	Al Awahdiah	276	150	21	4	4	4	3	3	4	4	4	4	4
57	Al Baath (Kirkuk Neighborhood)	155	970	600	2	2	2	2	1	3	3	2	3	1
193	Al Bushaha	217	125	35	3	3	3	4	3	3	3	3	3	2
40	Al Ghaz Apartments	77	5000	636	1	1	1	2	1	1	1	1	1	1
133	Al Hadideen (Kirkuk Neighborho	113	10000	1300	1	3	2	2	1	2	1	1	1	1
145	Al Hamil	151	150	30	4	1	4	1	2	4	1	4	1	1
95	Al Horiah (Kirkuk Neighborhood)	120	20000	2500	1	2	1	2	1	1	1	2	1	4
20	Al Humera al sugraa (small)	228	139	20	3	3	3	3	3	3	2	2	2	3
5	Al Humeraa	232	138	45	3	3	3	3	3	2	3	3	3	3

VII. DESERVE DATABASE

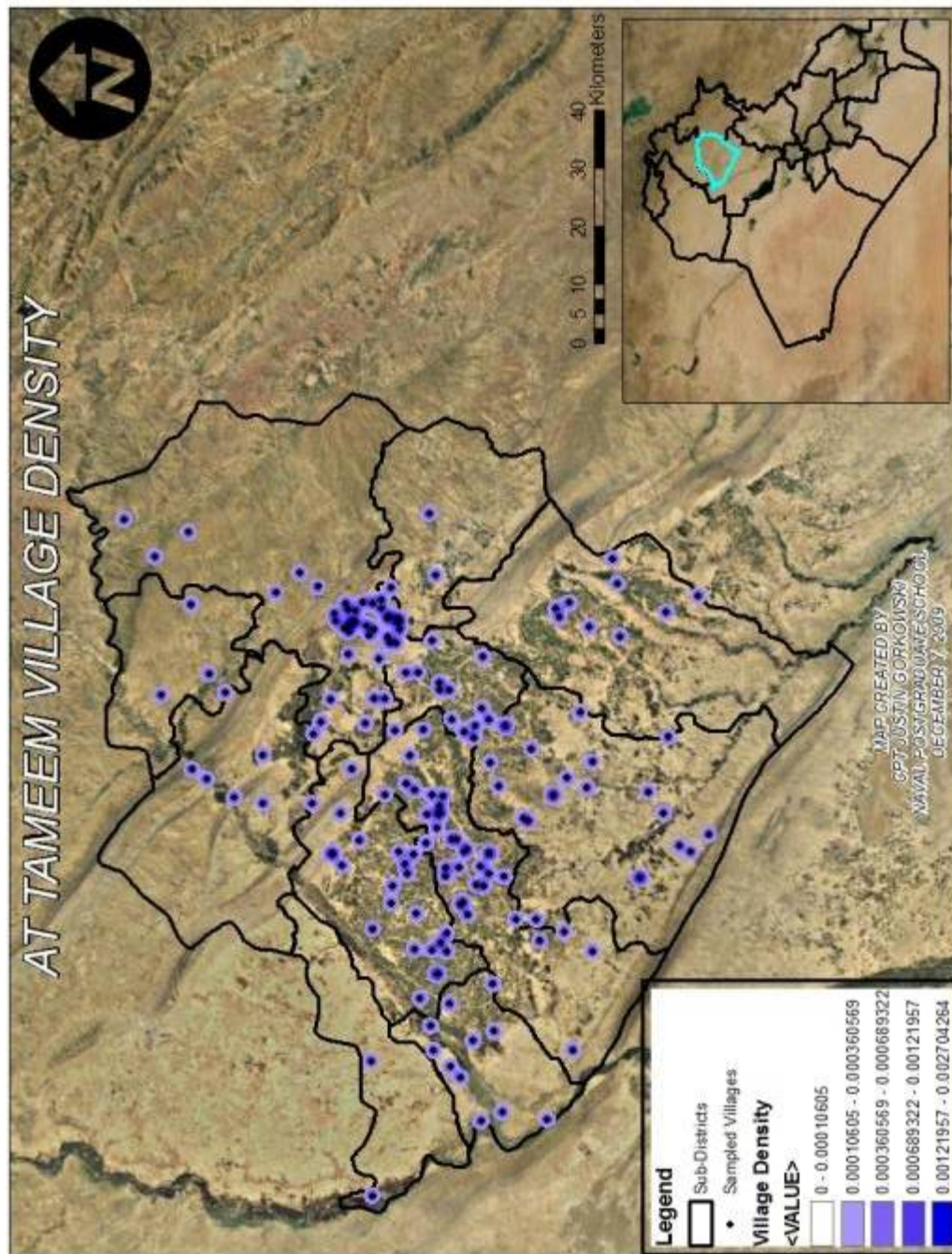
Village Name	Deserve											
	Actions				Attitudes							
	0.50				0.50							
Weight:												
Weight:	B _{Ac}				T _{Ac}				S _{Ac}			
	Raw Value	Normalized Value	Raw Value	Normalized Value	Raw Value	Normalized Value	Raw Value	Normalized Value	Raw Value	Normalized Value	Raw Value	Normalized Value
Abdulla Al-Yassin	0	1.00	0	0.00	17	0.97	2	0.67	2	0.67	1	1.00
Abdullah	0	1.00	0	0.00	4	0.99	2	0.67	2	0.67	2	0.67
Abu Kubba	0	1.00	0	0.00	48	0.93	4	0.00	4	0.00	3	0.33
Abu-Al-Jaise	0	1.00	0	0.00	121	0.81	2	0.67	1	1.00	1	1.00
Addris Sultan	3	0.88	1	0.04	28	0.96	4	0.00	1	1.00	1	1.00
Aisalana	0	1.00	0	0.00	7	0.99	2	0.67	2	0.67	1	1.00
Al Adria	0	1.00	0	0.00	104	0.84	3	0.33	2	0.67	2	0.67
Al Ahnaf	0	1.00	0	0.00	18	0.97	4	0.00	2	0.67	1	1.00
Al Ammar	0	1.00	0	0.00	3	1.00	3	0.33	1	1.00	1	1.00
Al Ammara	0	1.00	0	0.00	61	0.91	4	0.00	3	0.33	1	1.00
Al Asraa Wa Almufqde	0	1.00	1	0.04	180	0.72	2	0.67	2	0.67	2	0.67
Al Awahdiah	0	1.00	0	0.00	19	0.97	4	0.00	3	0.33	3	0.33
Al Baath (Kirkuk Neigh	0	1.00	2	0.08	317	0.51	2	0.67	2	0.67	2	0.67
Al Bushaha	0	1.00	0	0.00	20	0.97	2	0.67	2	0.67	2	0.67
Al Ghaz Apartments	0	1.00	0	0.00	23	0.96	1	1.00	2	0.67	2	0.67
Al Hadideen (Kirkuk Ne	0	1.00	3	0.13	195	0.70	1	1.00	1	1.00	1	1.00
Al Hamil	0	1.00	0	0.00	34	0.95	3	0.33	1	1.00	1	1.00
Al Horiah (Kirkuk Neigh	0	1.00	2	0.08	89	0.86	1	1.00	1	1.00	1	1.00
Al Humera al sugraa (S	0	1.00	0	0.00	34	0.95	4	0.00	2	0.67	2	0.67
Al Humeraa	0	1.00	0	0.00	17	0.97	3	0.33	3	0.33	3	0.33
Al Khatunia Al Wusta	0	1.00	0	0.00	50	0.92	1	1.00	4	0.00	1	1.00
Al Maftahul	0	1.00	0	0.00	0	1.00	1	1.00	1	1.00	1	1.00
Al Mansyaa	0	1.00	0	0.00	6	0.99	3	0.33	1	1.00	1	1.00

Output = where a village falls on the spectrum of popular support

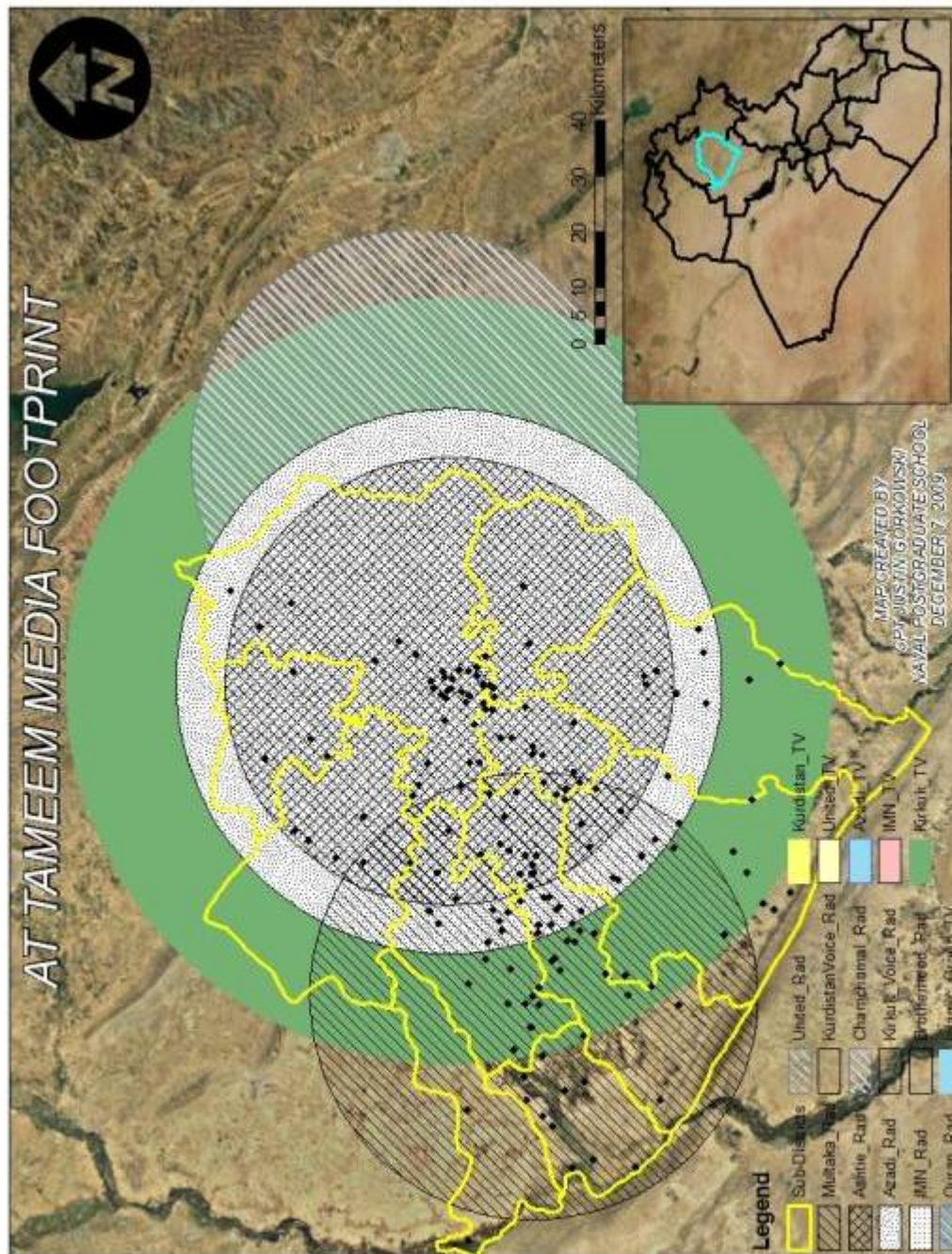
VIII. POPULATION DENSITY MAP



IX. VILLAGE DENSITY MAP



X. AT TAMEEM MEDIA FOOTPRINT



XI. MEDIA SPREADSHEET

VIL #	Sub_District	Village_Na	Population	Houses	Bhood_Rad	Kirk_Voice	Chamch_Ra	Kurd_Rad	United_Rac	Quran_Rad	IMN_Rad	Azadi_Rad	Ashtie_Rad	Multaka_Re	United_TV
1	Rashaad	Abdulla Al-Yassin	800	140	0	0	0	0	0	0	0	0	0	1	0
2	Daquq	Abdullah	1000	200	1	1	0	1	1	1	1	1	1	0	1
3	Riyad	Abu Kubba	175	65	1	1	1	0	1	1	1	1	1	1	1
4	Riyad	Abu-Al-Jaise	450	50	0	0	0	0	0	0	0	0	0	1	0
5	Kirkuk	Adris Sultan	300	50	1	1	1	0	1	1	1	1	1	1	1
6	Haweeja	Aisalana	1200	100	0	0	0	0	0	0	0	1	0	1	0
7	Taza	Al Adria	90	13	1	1	1	0	1	1	1	1	1	0	1
8	Abassi	Al Ahnaf	500	60	0	0	0	0	0	0	0	0	0	1	0
9	Riyad	Al Ammar	190	22	0	0	0	0	0	0	0	1	0	1	0
10	Haweeja	Al Ammara	153	13	0	0	0	0	0	0	0	1	0	1	0
11	Kirkuk	Al Asraa Wa Almufoqder	3350	1300	1	1	1	0	1	1	1	1	1	0	1
12	Riyad	Al Awahdiah	150	21	0	0	0	0	0	0	0	1	0	1	0
13	Kirkuk	Al Baath (Kirkuk Neight	970	600	1	1	1	0	1	1	1	1	1	0	1
14	Kirkuk	Al Bushaha	125	35	1	1	1	0	1	1	1	1	1	0	1
15	Dibs	Al Ghaz Apartments	5000	636	1	1	1	0	1	1	1	1	1	0	1
16	Kirkuk	Al Hadideen (Kirkuk Ne	10000	1300	1	1	1	0	1	1	1	1	1	0	1
17	Rashaad	Al Hamil	150	30	0	0	0	0	0	0	0	0	0	0	0
18	Kirkuk	Al Horiah (Kirkuk Neigh	20000	2500	1	1	1	1	1	1	1	1	1	0	1
19	Taza	Al Humera al sugraa (sr	139	20	1	1	1	0	1	1	1	1	1	1	1
20	Taza	Al Humeraa	138	45	1	1	1	0	1	1	1	1	1	1	1
21	Riyad	Al Khatunia Al Wusta	75	5	0	0	0	0	0	0	0	1	0	1	0
22	Zaab	Al Matthul	150	22	0	0	0	0	0	0	0	0	0	1	0
23	Rashaad	Al Mansyaa	55	10	0	0	0	0	0	0	0	0	0	1	0
24	Riyad	Al Mashroah al Sharkhi	575	150	0	0	0	0	0	0	0	0	0	1	0
25	Rashaad	Al Mulhalah	2100	250	0	0	0	0	0	0	0	1	0	0	0

APPENDIX C: RESULTS

I. FINAL REGRESSION OUTPUT

SUMMARY OUTPUT									
Regression Statistics									
Multiple R	0.291814487								
R Square	0.085155695								
Adjusted R Square	0.057150257								
Standard Error	5297348.403								
Observations	102								
ANOVA									
	df	SS	MS	F	Significance F				
Regression	3	2.55982E+14	8.53E+13	3.040684	0.032567645				
Residual	98	2.75007E+15	2.81E+13						
Total	101	3.00605E+15							
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	
Intercept	2272357.304	2662392.325	0.853502	0.395462	-3011073.482	7555788	-3011073	7555788	
X Variable 1	-20770.57573	11431.75535	-1.81692	0.072286	-43456.52158	1915.37	-43456.5	1915.37	
X Variable 2	17420483.37	13295162.06	1.310287	0.193161	-8963332.373	43804299	-8963332	43804299	
X Variable 3	3642566.748	2091834.999	1.741326	0.084765	-508611.6216	7793745	-508612	7793745	

II. PRIORITIZATION LIST

VIL#	Sub_District	Village	Needs	* Deserve =	IV1 Output *	IV2 Output =	Final Score	DV1	DV2	DV3
100	Kirkuk	Imam Kasam (Kirkuk Neighborhood)	243	0.16401331	39.85523545	1.9183375	76.455792	6256.438	16260481	1154526
127	Kirkuk	Qorea (Kirkuk Neighborhood)	182	0.14135188	25.72604220	2.6949358	69.330032	26246.85	68215558	3293538
18	Kirkuk	Al Horiah (Kirkuk Neighborhood)	260	0.16225328	42.18585162	1.6353367	68.988071	3630.408	9435430	535947.2
137	Kirkuk	Sahat Al Tieran (Kirkuk Neighborhood)	137	0.15888208	21.76684533	2.7764692	60.434975	1341.525	3486622	247557
16	Kirkuk	Al Hadideen (Kirkuk Neighborhood)	220	0.15219819	33.48360133	1.7707192	59.290056	13092.67	34027841	966417.2
35	Kirkuk	Al Shorjah (Kirkuk Neighborhood)	228	0.17016548	38.797772843	1.503614	58.336806	9542.63	24801294	1760940
79	Kirkuk	Dur Al Feylaq (Kirkuk Neighborhood)	216	0.12002297	25.92496172	2.0975552	54.379039	6954.462	18074646	1283335
64	Kirkuk	Arafa (Kirkuk Neighborhood)	196	0.16156202	31.66615620	1.7155789	54.325791	7653.675	19891901	847418.3
101	Kirkuk	Iskhan (Kirkuk Neighborhood)	269	0.16373150	44.04377233	1.0635423	46.842415	33769.61	87767213	2492657
130	Kirkuk	Rahimawa (Kirkuk Neighborhood)	118	0.16258295	19.18478816	2.0569391	39.46194	14251.53	37039730	7889679
78	Laylan	Dumeez (Kirkuk Neighborhood)	223	0.10872894	24.24655436	1.4365408	34.831164	0	0	0
120	Kirkuk	Musallah	183	0.16305726	29.83947805	1.1269908	33.628816	50106.67	1.3E+08	3328700
23	Rashaad	Al Mansyaa	268	0.13825081	37.05121661	0.8456508	31.33239	0	0	0
28	Laylan	Al Nedaa	201	0.10770801	21.64931087	1.4341011	31.047301	988.125	189720	35706.4
31	Kirkuk	Al Qadisiya Al Ulla (Kirkuk Neighborhood)	123	0.15721903	19.33794091	1.4599824	28.233053	0	0	0
95	Laylan	Hisar Haji Abdullah	208	0.08192956	17.04134763	1.4013905	23.881583	1516.364	291141.8	9680.374
11	Kirkuk	Al Asraa Wa Almufqden (Kirkuk Neight	216	0.09811199	21.19218989	1.1015517	23.344294	1616.911	4202352	39982.28
39	Haweeja	Al-Abassia	229	0.11230858	25.71866386	0.8771448	22.558992	11500	13857500	2278284
146	Abassi	Shekh (Al Zaab)	228	0.10010720	22.82444104	0.9516041	21.719831	11094.6	3827637	2375770
37	Kirkuk	Al Wasiti (Kirkuk Neighborhood)	213	0.05897230	12.56109994	1.6992222	21.3441	2183.916	5675998	596450.3
107	Riyad	Khatuniya	179	0.12490429	22.35786753	0.9306601	20.807575	0	0	0
163	Daquq	Yangija	218	0.16653905	36.30551302	0.5676073	20.607275	333835	18027090	11314310
74	Kirkuk	Dirvaz (Shwan area)	157	0.09665770	15.17525860	1.3564224	20.584061	5038.903	13096109	44632.77
4	Riyad	Abu-Al-Jaise	262	0.13862302	36.31923175	0.5190691	18.852192	1893.802	5181441	67922.65
56	Taza	Al-Qadissiyya	89	0.14692871	13.07665476	1.4313456	18.717212	77834.78	56975059	40782697

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